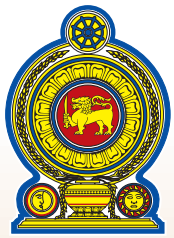

ANNUAL HEALTH BULLETIN 2014

MINISTRY OF HEALTH, NUTRITION AND
INDIGENOUS MEDICINE
SRI LANKA

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2014

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Medical Statistics Unit

Ministry of Health, Nutrition and Indigenous Medicine

ISBN 978-955-577-998-2

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Published in 2016

Preface

Annual Health Bulletin, 2014 is the 29th edition of the series, published since 1980. It provides comprehensive information of government health sector in Sri Lanka. It is expected that the information needs of policy makers, health planners, researchers and others interested in the field of health development as well as information for monitoring and evaluation purposes are met by this publication.

The bulletin contains information of four major areas viz. morbidity, mortality, resource availability and provision of services. In addition details and performance of health and health related programs, campaigns and institutions are included. This publication reflects the health status of Sri Lanka during 2014 and trends over the period as well.

The officials who have given their generous support by providing data of their institutions, programs and surveys are greatly appreciated and it is expected their continuous support in due course.

Data collection, compilation and preparation of this publication are undertaken by the staff of Medical Statistics Unit. A special word of appreciation deserves to the Medical Statistics Unit for their efforts in making this publication a success.

Anura Jayawickrama
Secretary
Ministry of Health, Nutrition and Indigenous Medicine

Message from the Director General of Health Services

Healthy nation is a wealth of a country. The primary responsibility of the Department of Health Services is to ensure the wellbeing of the nation by providing efficient health service. Department of Health Services has expanded its services with new technologies during last few years and initiated many development projects to meet the growing needs; health statistics are essential for monitoring and evaluation of these projects. The Annual Health Bulletin, main publication contains health information, provides vital information of government health sector, mainly pertaining to curative sector and preventive sector as well.

Indoor Morbidity and Mortality Return (IMMR) which gives the details of inpatients is the better part of health information system which supports the management of health care, monitoring of disease patterns, identifying disease burden and prevention. Implementation of electronic Indoor Morbidity and Mortality Return (eIMMR), a web based system of inpatient data collection is the prompt step placed in gathering of timely, accurate and detailed data. Data sent through eIMMR by more than two hundred hospitals are comprised in this publication. I express my sincere gratitude to two Medical Officers of Biomedical Informatics who developed the system. The commitment of all the officers in ground level implementation of the system including staff of Medical Statistics Unit, Provincial and Regional Directors, all heads of the hospitals and staff of Medical Record Room are highly appreciated.

Further, I wish to extend my gratitude for all the officials who have given their fullest support by providing data and write ups and for the staff of Medical Statistics Unit who have directly responsible for data collection, processing, compilation and preparation of this publication.

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

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Indicator		Year	Data	Source
Demographic Indicators				
Total population (in thousands)		2014*	20,771	Registrar General's Department
Land area (sq. km)		1988	62,705	Survey General's Department
Population density (persons per sq. km)		2014*	332	Registrar General's Department
Crude birth rate (per 1,000 population)		2014*	16.9	Registrar General's Department
Crude death rate (per 1,000 population)		2014*	6.2	
Urban population (%)		2012	18.2	Census of Population & Housing, 2012
Sex ratio (No. of males per 100 females)		2012	93.8	
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	Census of Population & Housing, 2012
Socio-economic Indicators				
GNP per capita at current prices (Rs.)		2014*	461,650	Department of Census & Statistics
Human development index		2014	0.711	UNDP, Human Development Report, 2015
Unemployment rate	Total	2014	4.2	Department of Census & Statistics
	Female		6.2	
	Male		3.2	
Dependency ratio	Total	2012	60.2	Census of population & Housing, 2012
	Old-age (60 years and more)		19.8	
	Young (under 15 years)		40.4	
Literacy rate (%)	Total	2012	95.7	Census of population & Housing, 2012
(10 years or more)	Female		94.6	
	Male		96.9	
Pupil teacher ratio in	Government Schools	2014	18	Ministry of Education
	Private Schools		20	
	Pirivenas		10	
Singulate mean age at marriage (years)	Female	2012	23.4	Census of population & Housing, 2012
Health and Nutrition Indicators				
Life expectancy at birth (years)				Department of Census and Statistics (Life Tables for Sri Lanka 2011-2013 by District and Sex)
	Female	2011-2013 [1]	78.6	
	Male		72.0	
Neonatal mortality rate (per 1,000 live births)		2010	7.0	Registrar General's Department
Infant mortality rate (per 1,000 live births)		2010	9.9	
Under-five mortality rate (per 1,000 live births)		2010	12.2	
Average No. of children born to ever married women in Sri Lanka		2012	2.4	Census Population & Housing, 2012
Maternal mortality rate (per 100,000 live births)		2010*	22.0	Registrar General's Department
Low-birth-weight per 100 live births in government hospitals %		2014	16.0	Medical Statistics Unit
Percentage of under five children				Family Health Bureau
	Under weight (weight-for-age)	2014	16.4	
	Wasting (Acute undernutrtion or weight-for-height)		12.2	
	Stunting (Chronic malnutrition or height-for-age)		10.5	

Contd.

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[2], 2006/07
Percentage of live births occured in government hospitals	2014	94.6	Medical Statistics Unit
Women of childbearing age using contraceptives (%) Modern method	2006/07	52.5	Demographic and Health Survey[2], 2006/07
Traditional method		15.9	
Population with access to safe water (%)	2012	81.1	Census Pouplation & Housing, 2012
Health Resources			
Government health expenditure as a percent of GNP	2014	1.62	Department of Health Services
Government health expenditure as a percent of total government expenditure	2014	5.96	
Per capita health expenditure (Rs.)	2014	7,497	
Medical Officers per 100,000 population	2014	84.8	Medical Statistics Unit
Population per Medical Officer	2014	1,179	
Dental Surgeons per 100,000 population	2014	6.5	
Nurses per 100,000 population	2014	185.1	
Public Health Midwives per 100,000 population	2014	28.7	
Number of hospitals	2014	622	
Number of hospital beds	2014	80,105	
Hospital beds per 1,000 population	2014	3.9	
Number of Medical Officer of Health (MOH) Divisions	2014	338	

* Provisional

[1] Number of deaths used for this period corresponds to usual residence

[2] Demographic and Health Survey, 2006/07 - Exclude Northern Province

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 area of the country is 65,610 square kilometers including inland water. The mean temperature ranges from 26.5° C to 28.5° C (79.7° F to 83.3° 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 the 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 final results of the census, enumerated population was 20,359 thousand.

The estimated mid year population of Sri Lanka for the year 2014 is 20,771 thousand (Detailed Table 2). Unequal distribution of population can be observed among districts. Colombo district is the most populous district of the country with a population 2,357 thousand. This is followed by Gampaha district which records a population of 2,338 thousand. Mullaitivu district records the lowest population (94 thousand) among the districts, followed by Mannar district with a population 103 thousand.

1.3.1 Population Density

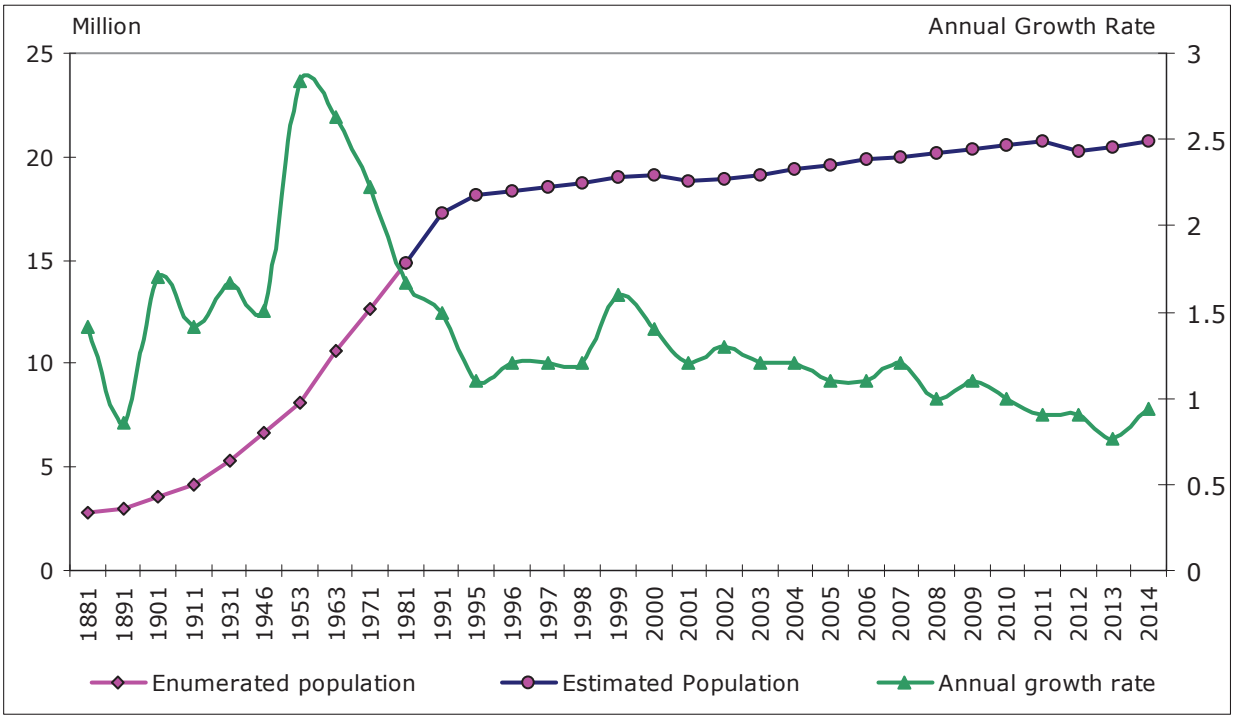
Population density is defined as number of persons in a unit area. It measures the level of concentration of the population in a particular area. It is vital to study population density by districts since it might be caused to many health hazards due to over crowding.

Population density of 230 persons per square kilometer in 1981 census has increased to 325 in the 2012 census. During this 30 year period the population density of the country has increased by 41 percent. Population density for the year 2014 is 332 persons per square kilometer (Detailed Table 2).

Population densities among districts show huge regional variations. Colombo district shows the highest density of 3,487 persons per square kilometer in 2014. The next highest density of 1,744 was recorded from the adjoining district Gampaha.

According to Registrar General's Department, annual population growth rate is 0.94 percent during the year 2014 (Fig 1.1)

Fig 1.1 : Population Size and Annual Growth Rate, 1881 - 2014



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

Kalutara, Kandy, Galle, Matara and Jaffna districts have population densities of more than 600 persons per square kilometer.

Mullaitivu district was the district with the lowest population density of 39 persons per square kilometer. Over half of the population is concentrated in the Western, Central and Southern provinces which jointly covered less than one fourth of the total land area of the country.

1.3.2 Age Composition

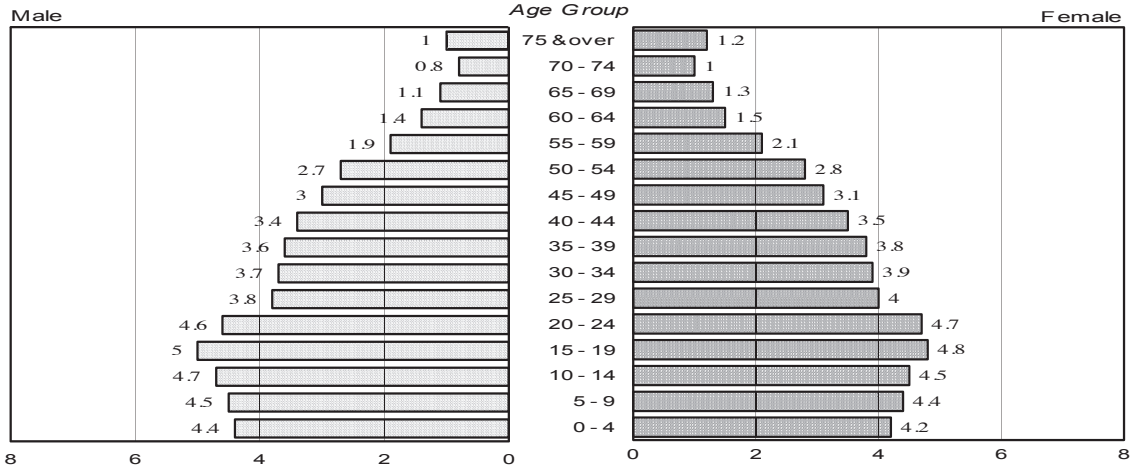
Age composition of population describes the pattern of the distribution of people in different age categories. In comparison with the Census of Population and Housing - 1981, the population aged below 15 years has decreased by 10 percentage points during the period from 1981 to 2014 whilst the population aged 60 years and over has increased by 5.8 percentage points (Table 1.1). Accordingly, population of Sri Lanka seems to be gradually shifting to an aging population.

According to the report of Census of Population & Housing - 2012, median age of population is 31 years where as the median age was around 21.3 years until 1981.

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 49.1 percent in 2014.

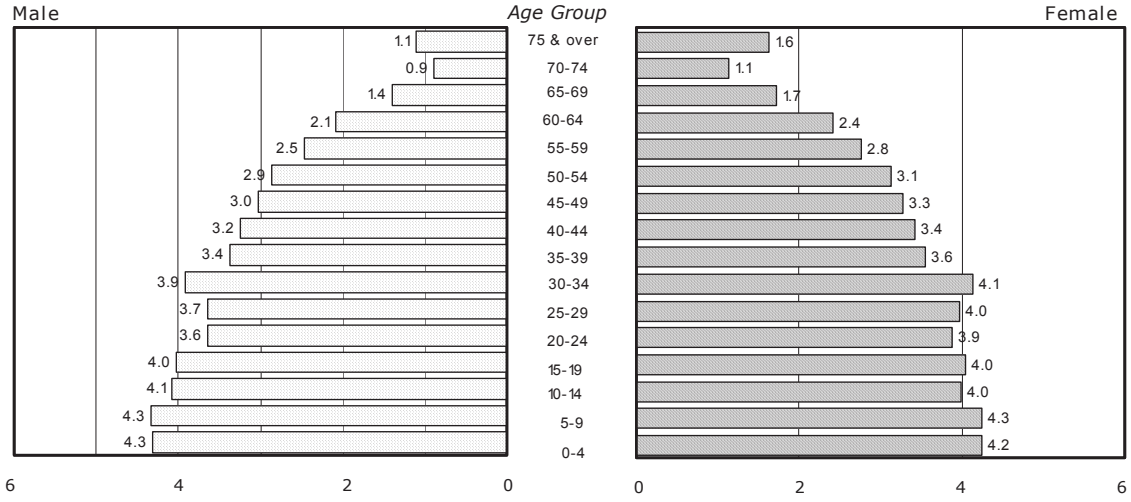
Shifting of median age and increasing trend of aging index are also refering to aging of Sri Lankan population. It is noticable that dependency ratio which is an approximation of the average number of dependents that each person of working age must support, has decreased from 71.8 in 1981 to 60.3 in 2014 due to relative decline in the proportion of children.

Fig 1.2 : Population of Sri Lanka by Age and Sex, 2001, 2012 and 2014

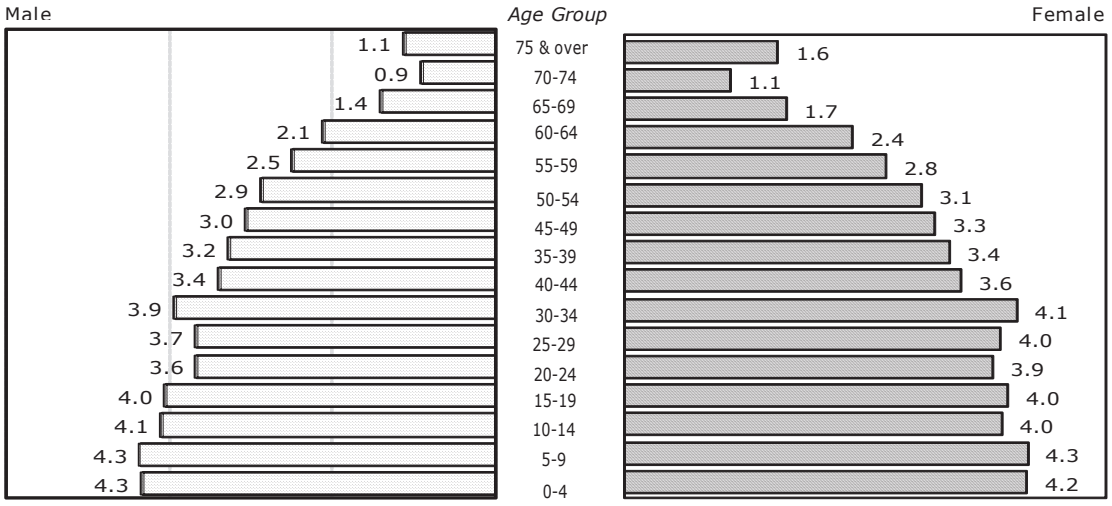


(Excludes: Northern and Eastern Provinces)

Based on Population Census 2001[1]
Percentage of population



Based on Population Census 2012[1]
Percentage of population



Estimated Mid-Year Population 2014[2]
Percentage of population

Source : 1. Department of Census and Statistics
2. Registrar Generals' Department

Table 1.1 : 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	12.4	49.1	60.2
2014 [3]	25.2	62.4	12.4	49.1	60.3

[1] Excludes Northern province, Batticaloa and Trincomalee districts in Eastern province
[2] Census of population – 2012
[3] Estimated mid year population – RGO

1.3.3 Age-Sex Composition

Age-sex composition is clearly shown in Age-sex pyramid (Fig 1.2). Shapes of the three pyramids are more or less the same except that the population aged 15 – 19 years and 20-24 years shows a clear decline while the population aged 55-59 years and 60-64 years shows an increase from 2001 to 2014. 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 is 93.8 in Sri Lanka for the year 2014. It indicates an excess of females over males. When comparing the sex ratio in 1981, 2001 and 2014 it shows a decreasing trend.

The age specific sex ratios in 2014 are declining gradually with increasing the age with fluctuations in some age groups.

Sex ratio under 1 year is 101.1 for the year 2014 which reflects more males among infants. According to Registrar General's Department, sex ratio at birth is 103.5 (provisional) for the year 2014. However, with the increase of age, the sex ratio shows a decreasing trend indicating more females than males in older age groups.

Table 1.2 : Age Specific Sex Ratio 1981, 2001 and 2014

Age Group in Years	Sex Ratio in Year		
	1981[1]	2001[1,2]	2014[3]
All Ages	103.9	97.9	93.8
Under 1	104.1	104.5	101.1
1 - 4	103.8		101.8
5 - 9	103.6	103.1	101.9
10 - 14	104.1	104.5	102.3
15 - 19	102.7	103.6	99.4
20 - 24	100.3	98.0	93.8
25 - 29	99.8	93.8	92.0
30 - 34	102.0	95.4	94.5
35 - 39	100.6	95.2	94.9
40 - 44	106.0	96.6	94.8
45 - 49	102.0	97.1	92.7
50 - 54	111.1	95.9	91.1
55 - 59	110.2	92.8	88.9
60 - 64	116.2	92.7	86.5
65 - 69	111.0	88.0	81.0
70 - 74	115.7	85.0	79.1
75 and Over	107.3	84.6	67.6

[1] Census of Population & Housing
[2] Excludes Northern Province, Batticaloa and Trincomalee districts in Eastern Province
[3] Estimated mid year population - RGO

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 has 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 expectancy 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 - 2013

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	64.0	66.9
1980-1982	67.7	72.1
2000-2002	68.8	77.2
2011-2013*	72.0	78.6

Source: Department of Census & Statistics

* Number of deaths used for this period corresponds to usual residence

1.3.6 Singulate Mean Age at Marriage

As per 2012 Population Census, the mean ages at marriage of males and females are 27.2 years and 23.4 years respectively. Thus, on an average, the difference of male and female mean age at marriage in 2012 stands at 3.8 years.

On the other hand, urban females reports the highest mean age at marriage (24.8 years), while the lowest figure is reported from among the estate females (22.8 years).

The lowest gender difference in the mean age at marriage is observed in the urban sector of Sri Lanka, while the highest gender difference in the mean age at marriage is found in the rural sector.

1.3.7 Children Ever Born

In the Census of Population and Housing – 2012, the data on number of children ever born alive to a woman has been collected from ever married women of age 15 years and above.

In 2012, highest percentage of ever married women aged 15 years and above is reported for having given birth to 2 children.

Nearly 7 percent of the ever married women aged 15 years and above are reported that they have had no live births during their lifetime.

Fig 1.3 : Singulate Mean Age at Marriage by Sex and Sector, 2012

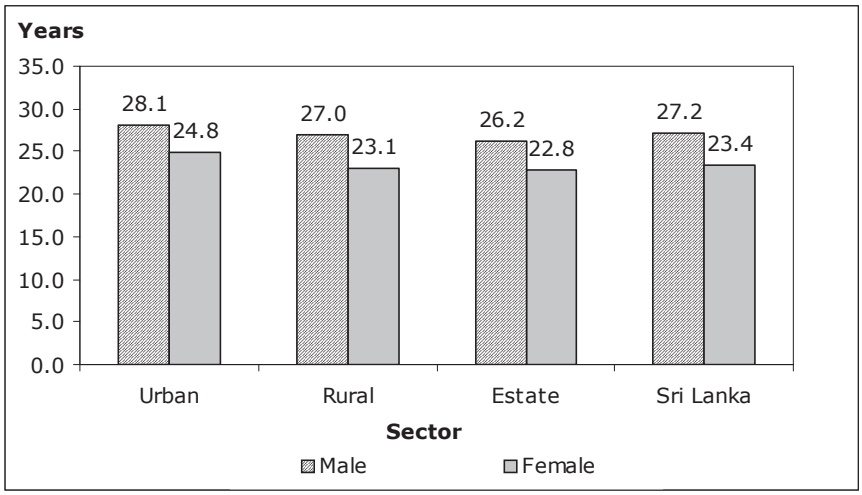
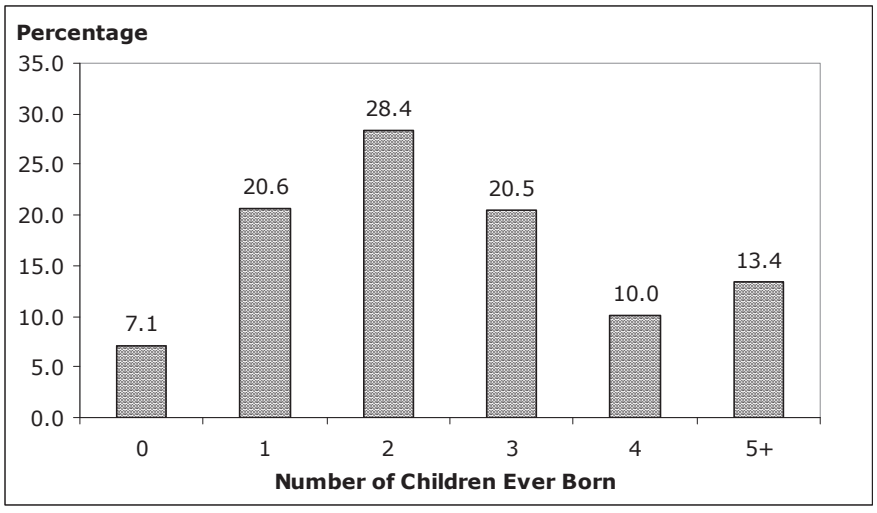


Fig 1.4 : Percentage Distribution of Number of Children Ever Born Alive to Ever Married Women Aged 15 years and Above, 2012



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.

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 - 2014

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	5.77	24	16.5	12.5
2000	19,102	18.2	6.08	20	13.3	9.9
2001	18,797	19.1	6.00	18	12.2	9.6
2002	18,921	19.4	5.91	16	11.4	8.4
2003	19,153	19.3	6.02	19	11.3	8.7
2004	19,435	18.8	5.91	12	9.8	7.2
2005	19,644	18.9	6.72	12	11.2	7.2
2006	19,858	18.8	5.92	14	10.0	7.4
2007	20,039	19.3	5.94	...	8.5	5.9
2008	20,246	18.5	6.12	...	9.0	6.2[a]
2009	20,476	18.0	6.24	22.3	9.7	6.4
2010	20,675	17.6	6.30	22.0	9.9	7.0
2011*	20,869	17.4	5.91	...	9.1	6.4
2012*	20,424[b]	17.5	6.00	...	8.5	6.1
2013*	20,579[b]	17.9	6.21	...	8.2	5.8
2014*	20,771[b]	16.9	6.20	...	...	...

* Provisional *Source: Registrar General's Department*

Note: a. Data for Mullaithivu and Killinochchi districts are not available

b. Estimates on mid-year population for 2012-2014 have been revised based on final data of the Census of Population & Housing, 2012

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 specifies all the action necessary with regard to appointment of staff, creation of registration divisions, reporting, issuing of certificates, late registration and penalties, etc.

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 1960-2014 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 1.5, 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 percent 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 2014 (provisional) is 16.9 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 place of occurance) is presented in the Detailed Table 4.

Trincomalee district reported the highest CBR (22.1) and the lowest CBR was reported from Mullaitvu district (11.6) for the year 2014.

1.4.2 Crude Death Rate (CDR)

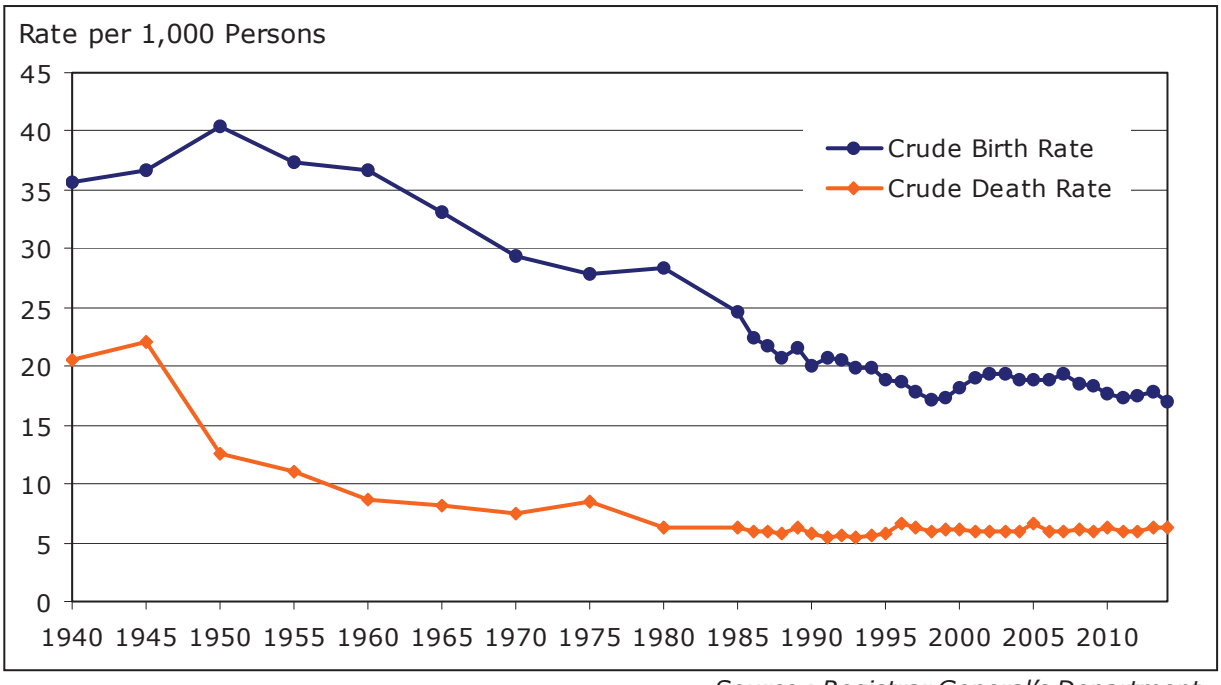
CDR is defined as the number of deaths in a particular year per 1,000 population.

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 2014 (Provisional) was 6.2 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 (7.3) followed by Kandy district (7.2) for the year 2014 (Detailed Table 4).

Fig 1.5 : Crude Birth and Death Rates, 1940 - 2014



Source : Registrar General's Department

1.4.3 Maternal Mortality Ratio (MMR)

Maternal Mortality Ratio is 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 2010 and the MMR reported is 22.0 per 100,000 live births (Table 1.4).
2. According to government hospital statistics (government institutions only) the corresponding MMR is 19.3 per 100,000 live births (Detailed Table 40) for the year 2014.
3. Maternal Mortality Ratio (MMR) reported by Family Health Bureau (FHB) for the year 2014 is 32.03 per 100,000 live births.

FHB has developed a system to monitor maternal deaths and section 5.1.1.4.3 gives details of maternal deaths reported to FHB during the year 2014. It is important to note that more than 90 percent of registered live births occur in government institutions.

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 in Table 1.5. 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 an inverse relationship between the mother's educational attainment and the probability of death of a child. Mother's age, birth order and birth interval are some of the key factors affecting child mortality. (Demographic & Health Survey - 2006/07)

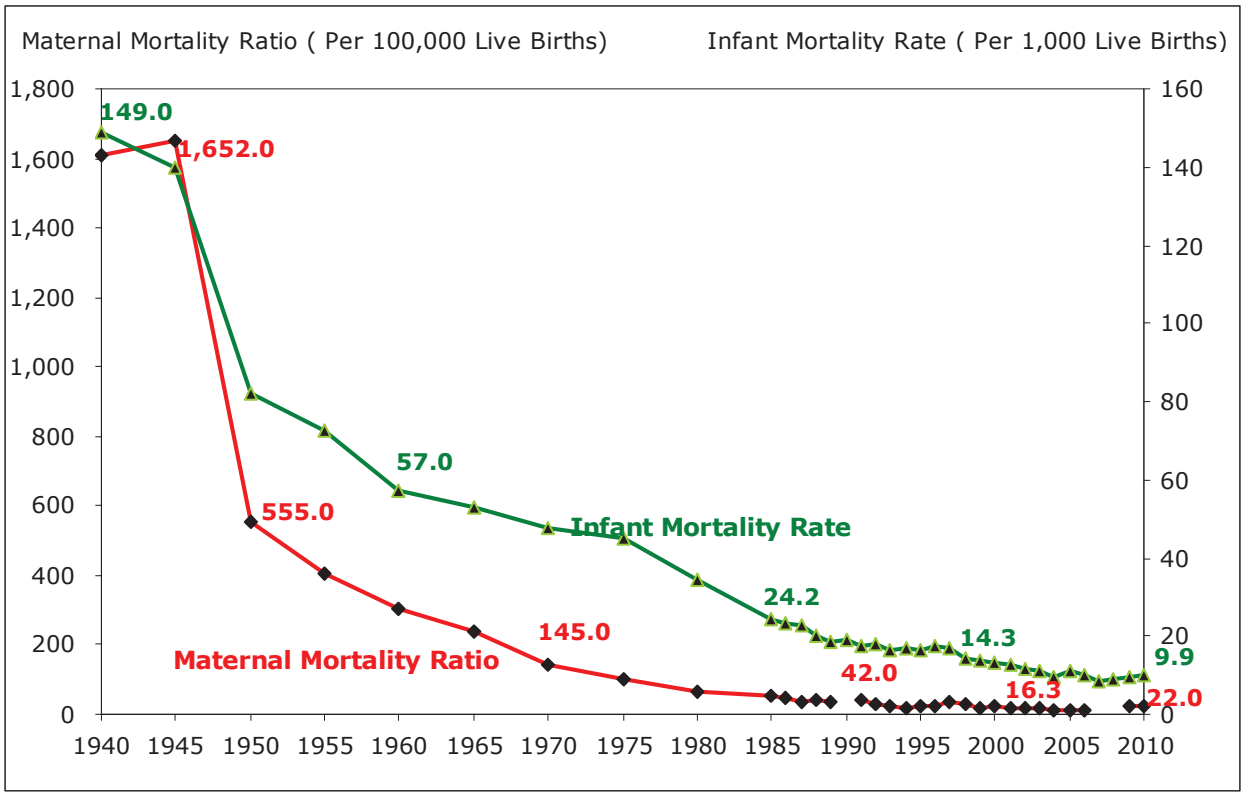
Table 1.5 : Under Five Mortality Rate per 1,000 Live Births

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
2010	12.2
2011*	10.9
2012*	10.3
2013*	10.0

** Provisional*

Source : Registrar General's Department

Fig 1.6 : Trends in Maternal and Infant Mortality Rates, 1940 - 2010



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 1.6 illustrates the trend graphically.

The IMR for the year 2010 produced by the Registrar General's Department by districts are given in Detailed Table 4. IMR for the year 2010 is 9.9 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 aged 28 days or less) 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. (Table 1.4)

The NNMR rate recorded for 2013 is 5.8 (Provisional) per 1,000 live births.

1.4.7 Total Fertility Rate

The Total Fertility Rate (TFR), of a population is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates through her lifetime and she were to survive from birth through the end of her reproductive life.

TFR shows a declining trend from 2.8 in DHS -1987 to 2.4 in Census of Population and Housing (CPH)-2012.

Table 1.6 : Fertility Rates, 1987 - 2012

Age Group (In Years)	CPH 2012	2004-2007 DHS 2006/07	1995-2000 DHS 2000	1988-1993 DHS 1993	1982-1987 DHS 1987
15 - 19	36	28	27	35	38
20 - 24	107	101	83	110	147
25 - 29	147	145	118	134	161
30 - 34	118	121	98	104	122
35 - 39	58	54	40	54	71
40 - 44	16	13	8	14	23
45 - 49	2	1	1	4	3
TFR	2.4	2.3	1.9	2.3	2.8

Note: Age specific fertility rates of selected surveys are, per 1,000 women
DHS - Demographic and Health Survey

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 in 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 followed by '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 Millennium 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 the Household Income and Expenditure Survey (HIES) since 1990/91 and continued once in every five years until 2006/07. Thereafter it was conducted once in every three years starting from 2009/10 due to rapidly changing economic conditions demanded far more frequent monitoring of the household income and expenditure patterns in the country. The HIES questionnaire was revised in 2006/07 to capture all household information which helps to understand total living standard of the households including health status of the households.

The latest HIES survey which was carried out in 2012/13, covered 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 final report of HIES 2012/13 is issued by Department of Census and Statistics based on the data collected throughout the country during the period from July 2012 to June 2013.

The estimates given are mostly limited to residencial sector level in order 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. Information on receiving 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 was collected.

The survey reveals that,

- On an average 17.4 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 15.0 percent from a private hospital or a health care center as out patients.
- About 8.4 percent of the household population has taken health treatment during the 12 months prior to the survey period from a government hospital and 0.8 percent from a private hospital as in-patients.
- Out of total household population in Sri Lanka, 14.2 percent has suffered from chronic illness or disability at the time of the survey.

(The final 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 is regarded as literate. The literacy rate is defined as the percentage of the literate population aged 10 years and over. The Census of Population and Housing - 2012 reveals that the litaracy rate is 95.7 percent.

So, the literacy rate has increased by 8.5 percentage points from 1981 (87.2 percent in 1981). The literacy rate of males (96.9 percent) is relatively higher than that of females (94.6 percent). As per the Census of Population and Housing - 2012, percentage of literate population in the urban sector is 97.7 percent while the corresponding figures for the rural and estate sectors are 95.7 and 86.1 precent respectively.

1.7.2 Level of Education

The results of the Census of population and Housing - 2012 reveals that 3.8 percent of the population aged 5 years and over had never been to school and corresponding percentages for males and females were 2.7 and 4.7 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, but 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 the census, 8.7 percent of the population aged 5 years and over was suffering from at least one domain of the above difficulties.

Table 1.7 : 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	8.7
Seeing	5.4
Hearing	2.1
Walking	3.9
Cognition	1.8
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 final results based on the census, majority of households drink water from protected wells (46.1 percent) and the percentage of households getting water from unprotected wells is 4 percent. Comparison with previous censuses and surveys reveals 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 bottled water are considered as safe drinking water sources. So, around 81 percent of households have access to safe drinking water (Detailed Table 5).

The percentage of households using piped born water for drinking is 31.4 precent. However significant variations can be seen among districts as well as sectors.

1.8.2 Toilet Facilities

According to the results of the Census of Population and Housing - 2012, 98.3 precent of the households have their own toilet facilities; 86.7 precent have a toilet exclusively for the household and 11.6 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 Kilinochchi, Mullaitivu and Batticaloa districts.

2. Organization of Health Services

The Sri Lankan health system comprises of different systems of medicine ; Western, Ayurwedhic, Unani, Sidha , Homeopathy and Acupuncture. Of these, the western or allopathic medicine is the main sector catering to the needs of the majority.

Allopathic medicine is provided through both public and the private sector, the share of care being different for in patients and out patients. The public sector provides for bulk of in patient care, approximately 95 percent, providing a safety net to citizens. More than six million hospitalizations occured in 2014. Share of out patient care is divided almost equally between public and private sector. A total of fifty five million out patient visits occurred in 2014 in public sector.

The public sector has an extensive network of health care institutions and also has a system for Ayurvedhic care. The private sector provides access to all types of care at a cost.

The public health sector organization is arranged in almost two parallel streams of community health services focusing mainly on promotive and preventive health whilst the curative services range from non specialized care at primary level to specialized care through a range of hospitals.

The central health ministry is the leading agency providing stewardship to health service development and regulation. The delivery of care in public sector is decentralized and management of primary care in some specialized allopathic hospitals are by the Provincial health authorities. The central health ministry is also responsible in ensuring resources for health such as trained human resources, drug supply and major health infrastructure developments.

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 then, 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. A review of the policy is envisaged to consider policy principles that would apply for next ten years.

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 status by responding to peoples' needs, working in partnerships, to ensure access to comprehensive high quality, equitablity, cost effectiveness and sustainable health services.

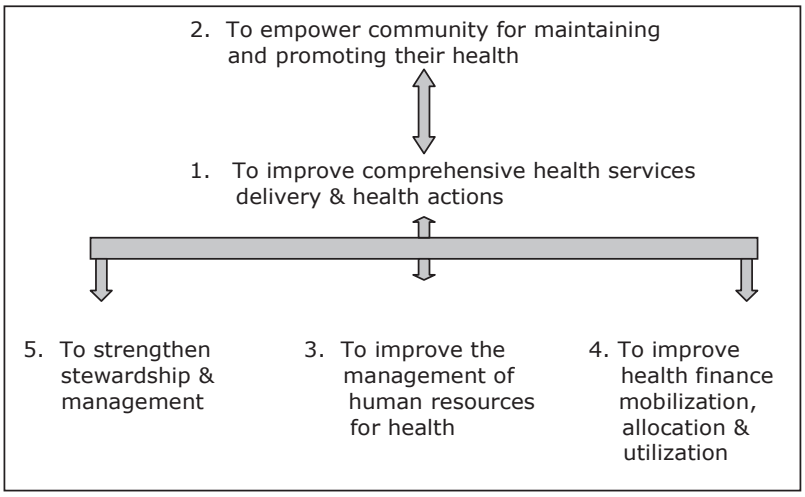
2.1.3 National Health Development Plan

The National Health development plan 2012-2017 is currently being implemented. The development plan has been based on the health master plan strategic areas.

2.1.4 National Health Policy and its Contribution to Achieve Government Policy

The health policy principles are designed to support Sri Lankas overall economic and social goals. It aims to facilitate equity through easy accessibility to health services, improve productivity and ensure that resources invested in health result in a healthier population that is able to contribute to 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. National health policy is coherent with the government vision and policy statements.

Fig 2.1 : Interrelationship between the Strategic Objectives



Another important function is the central procurement of drugs according to requirements of the government health services (provided free of charge to patients) and also as a price control measure through government franchised pharmacy outlets (Osu Sala) that make drugs available at reasonable cost.

2.2 Organization of the Health Care Delivery System

Health care is delivered through government and private providers. The government health system has been partially decentralized to Provincial Councils since 1989.

The Ministry of Health is the leading agency providing stewardship to health service development and delivery. Its main function is formulating public health policy and regulating services for both public and private sector. It is also responsible for directly managing several large specialized services (National Hospital of Sri Lanka, Teaching hospitals, specialized hospitals, provincial general hospitals and selected District General Hospitals) whilst the rest of the government services in the allopathic system is managed by the decentralized system ,i.e. nine provincial health authorities.

The Ministry of Health is also responsible for recruitment and training of some of the health human resources. Doctors trained in the eight State universities and recognized private medical universities are recruited by the Ministry of Health and deployed on an all island basis in the government health service.

The Ministry of Health has several other training institutes throughout the country such as Nurses training schools, National Institute of Health Sciences, etc directly under its management that provide basic, post basic and in- service training to all categories of health staff engaged in providing both curative and preventive services.

The State Pharmaceutical Corporation is the procurement agency for drugs and medical supplies for the Ministry of Health, which follows national procurement guidelines and other stringent procedures for evaluation and selection laid down by the Ministry of Health.

The State Pharmaceutical Manufacturing Corporation is also a supplier of drugs, the capacity of which can be enhanced further. Other registered private suppliers both local and international, follow tender procedures to supply drugs.

The Medical Supplies Division (MSD) is the main distribution agency. It is also responsible to identify the annual requirement. Once drugs are procured, the distribution is done according to requirement of the main hospitals under the central ministry and to the regional (district level) MSDs to meet the district level requirements.

A different section in this bulletin further outline the government healthcare delivery system which include health administration, curative care institutions, community health services and public health programs, training institutions, other resource institutions and financing mechanisms.

The National Health Policy also recognizes the role of civil society organizations and other non governmental organizations, although currently their overall contribution to health service.

The Ministry of Health organization - is a large organization and its structure depicts the wide responsibility. Key national program areas have separate units headed by Directors. National program specific policy, goals, strategies and recommended interventions are given by these units as directives to guide health sector development and service delivery.

Refer Fig 2.2 structure of Ministry of Health organization.

National health programs have curative and community health services for implementation. Whilst some programs have more relevance to one type, others have similar thrust for both patient care and preventive health.

2.2.1 Curative/Hospital Care Services

By end of 2014 there were 1,085 (upto PMCU) curative care hospitals in government health service. The distribution of these institutions according to the standard categorization is given in Detailed Table 7.

2.2.2 Preventive/Community Health Services

Community health services are organized into health units while most of them are coincide geographically with divisional secretariat areas. These are commonly known as medical officer of health (MOH) areas. There are 338 MOH areas in Sri Lanka and each is headed by a Medical Officer responsible for a defined population. The MOH is supported by field public health staff. The average population for a MOH is approximately 60,000. Each member of health staff (Public Health Nursing Sister, Public Health Inspector, Supervising Public Health Midwife, Public Health Midwife) is also responsible for a sub divided area and the respective population. The overall responsibility for management of community health services lies with the Provincial Health Authorities.

Key responsibilities of the MOH are

- Health advocacy and multi sector coordination for improvement of health in the area
- Health promotion, empowerment and community participation in health
- Creating awareness for healthy lifestyles and referrals for screening for non communicable diseases
- Maternal and Child health - antenatal, post natal care, immunization, monitoring of child development and growth, prevention of home accidents, school health services, adolescent health and reproductive health, oral health services
- Control of communicable diseases
- Monitoring of quality and safety of water and sanitation
- Occupational health
- Implementation of the Food Act
- Disaster management
- Supervision of health staff and services, monitoring and reporting of health service indicators, preparation of plans for health improvement in the area
- A life cycle approach is to be adopted to address chronic NCDs

2.3 Key Developments in the Health Sector in 2014

2.3.1 Expansion of Services for Screening for NCDs

With the high burden of NCDs, emphasis of the NCD program was to expand services for screening through advocating functioning of at least 2 healthy lifestyle centres per divisional secretariat area.

2.3.2 Health Policy Analysis & Development

Following description highlights key policy/strategic development areas that will contribute to health sector development.

2.3.2.1 Migration Health

Sri Lanka National Migration Health policy was approved by the Cabinet of Ministers and was launched in December 2013. The policy will address health issues of inbound, outbound, internal migrants and their families left behind. The policy will have implication to address health of a large segment of the population.

It has been recognized that globalization and increased mobility of people greatly facilitate the spread of diseases resulting in global pandemics. Re-emergence of eliminated diseases or introduction of new diseases/strains via migration flows is a public health threat to the country.

A significantly large number of foreigners obtain resident visa to Sri Lanka each year, and it is predicted that there will be a remarkable increase in the number, considering the expected economic development in the country and the trend of Sri Lanka becoming a labour receiving country. The number of resident visas issued (new and extensions) in Sri Lanka for the year 2009 is 33,872, for the 17 resident visa sub-classes.

Of these, majority (arround 70%) were in the 5 categories, namely, State sector, Board of Investment, Spouse Citizen, Students and Private sector. Hence, health assessment and ensuring vaccination of the immigrants is vital to maintain the country's achievements in health status.

The policy identifies several strategic interventions :

1. A health assessment will be introduced for resident visa i.e. for long stay visa applicants. The health assessment forms will be available on the website of Department of Immigration and Emigration. The Ministry of Health envisages a partnership with the International Organization for Migration(IOM) where IOM will technically support and also establish a mechanism for health assessment according to technical instruction given by the Ministry of Health. Initially the health assessment will be carried out after the entrance of a person to the country where the entry visa will need conversion to resident visa upon clearance from health assessment.

The cabinet has already approved to establish health assessment for resident visa applicants , with provision of relevant legal and institutional framework for its implementation public administration in a mechanism that a coordinated care plan is put in place before migration, irrespective of the age of left behind child.

2. Improving quality of health assessment carried for outbound labor migrants. Currently the Ministry of Health does not specify guidelines or standards for performing such health assessment that are carried out in the private sector.

The Ministry of Foreign Employment Promotion & Welfare has requested the Ministry of Health to provide such a guideline. Technical discussions with several professional colleges have been held to develop these guidelines.

3. Health promotion and improvement in occupational health is envisaged for internal migrants with the support of the Ministry of Labour. The policy on occupational safety and health lead by the Ministry of Labour will address this issue.

4. Families left behind of outbound migrants have significant impact on demand for health and social welfare need. The major policy intervention proposed is to involve the strength of grass root level officials of several institutions and ministries such as Sri Lanka Bureau of Foreign Employment (SLBFE), Health, Social Services, Child Protection, Child Probation, Economic Development, Education, local government and public administration in a mechanism that a coordinated care plan is put in place before migration, irrespective of the age of left behind child.

2.3.2.2 Policy Recommendation for Primary Health Care Strengthening Approach in Addressing Non Communicable Diseases in Sri Lanka

The Policy Unit together with Primary Care Services Unit in the Ministry of Health conducted an initial pilot in select institutions in three districts (Hambantota, Polonnaruwa and Nuwara Eliya) based on a primary care strengthening approach to address chronic NCDs. The pilot resulted in several contributions as key health systems development processes, guidelines and tools :

1. Revision of essential drug list to manage premier NCDs at Primary level hospitals (Divisional hospitals and primary medical care units)
2. NCD management guideline at primary care level using a multiple risk approach (includes referral criteria to specialized centers)
3. Emergency care guideline for primary care level
4. Life style modification guideline (a handbook) for primary level healthcare workers in all three languages
5. Guideline to establish lifestyle modification centres (healthy lifestyle clinic)

6. Life style modification tools (to be used in life style modification when guiding patients)
7. A Personal Health Record (and a Clinic Record to be made available subsequently to all citizens
8. Community screening guideline and referral card

The primary healthcare strengthening approach is intended to develop a health service which is organized around good quality primary level services which would offer the greatest potential to address NCDs whilst addressing personalized and family centered care.

The Key objectives in adopting this approach would be;

a. To achieve universal coverage for health services to address the present burden of NCDs
   (Expected impact - reduce preventable mortality due to chronic NCDs)
b. To minimize catastrophic health spending in low - middle income groups
   (Expected impact - reduce out of pocket expenditure for health)
c. To improve efficiency in resource utilization for health
   (Expected impact - increased utilization of primary level services for continuing care needs of chronic NCDs, i.e. shift of care for primary care needs to the primary level)
d. To improve quality of care
   (Expected outcome - overall patient satisfaction for continuing care needs)

The pilot study highlighted the need for greater community awareness through individual and settings approaches. A social marketing campaign is vital to address the common NCDs. Eight Healthy lifestyle targets were introduced and adopted as a means for creating awareness leading to empowerment. The targets are in line with the WHO strategy of common risk factor approach. The 8 mentioned together as Super 8, signifies the importance of collectively mentioning and addressing all risk factors as empowerment is needed in all risk areas; healthy eating, physical activity, stop tobacco and alcohol. The Ministry of Health took action to print and disseminate posters that depict the health targets for use by MOOHs through the Health Education Bureau.

The primary health care strengthening approach will address several issues in the health system to make it a more rational and cost efficient and effective system.

a. wider coverage for most important health conditions
b. patient focused and guidance based
c. referral and back referral practice improved
d. better utilization of local level hospitals that will reduce indirect cost to patients

2.3.2.3 Recommendation and Piloting of Shared Care Cluster System

Further to recommendation on strengthening primary care, a rational system of combining primary care with specialized care to form clusters for continuity of care as well as resource sharing between institutions is given as the 'shared care cluster system'.

A cluster is typically defined as the apex specialized hospital together with its surrounding primary care institutions which form a referral and back referral system. The system change also recommends that more accountability for clinical outcomes should be addressed with defining of catchment areas and population for medical officers in primary level institutions (divisional type hospitals and primary medical care units). In this way the shared care cluster too will have a catchment population, the system being similar to the community health services.

A policy brief on how primary care strengthening should take place was presented in a concept paper. Based on this a decision was taken to implement the shared care cluster system, initially in 4 districts. The shared care cluster system will be a key strategy in achieving universal health access, specially focusing on the chronic non communicable diseases.

The primary health care services unit designed and conducted training for nearly 300 post intern doctors who were to be deployed in primary level hospitals as capacity building for primary care strengthening. A consultative workshop was also carried out for all Faculties of Medicine in all Universities with the aim of improving curriculum to address competencies for managing at primary care level.

2.3.2.4 Further Improvements to Quality of Health Services

A consistent dialogue was initiated to develop strategies, guidelines and performance indicators to improve quality of health services.

The efforts were taken by the Directorate/ Healthcare Quality and Patient Safety and involved the respective units of the Ministry of Health, the Sri Lanka Medical Association (SLMA) and all professional colleges.

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 2014 were:

2.4.1 Coordination of the National Health Development Network & Performance Monitoring

1. Organization Development Unit acts as a secretariat for coordinating major national level policy decision making meetings . These are the National Health Development Committee and the Health Development Committee meetings.
2. Development of National Health Performance Framework: A technical consultation was initiated during 2013 - 2014 to develop a National Health Performance Framework. The framework identifies indicators according to 3 dimensions; effectiveness, efficiency and equality which will be used in the future to identify performance in health status, health services and contribution of important determinants of health. The framework is also coherent with monitoring of sustainable development goals.

2.4.2 Capacity Building of Health Staff

A series of staff development programs are being conducted on green practices, mindfulness and healthy lifestyles in order to improve the productivity of the health staff of Ministry of Health.

2.4.3 Implementation of National Migration Health Policy

Director/Organization Development is the national focal point for the coordination of implementation of the Migration Health Policy. The National Steering Committee on the Migration Health Policy implementation has appointed ten subcommittees to engage different sectors to implement the policy.

Areas prioritized for implementation are the development of a coordinated care plan for the children left behind by migrant workers in collaboration with the Family Health Bureau and other sectors such as Ministry of Foreign Employment Promotion and Welfare, Ministry of Child Development and Women's Affairs, Ministry of Education, Ministry of Local Government & Provincial Councils and Ministry of Social Services, the development of protocol and guidelines for health assessment for outbound migrants in collaboration with professional colleges, the development of protocol for the establishment of health assessment for the resident visa applicants to Sri Lanka in collaboration with the International Organization for Migration.

2.4.4 Coordination of Organization Reform

A key organization change , i.e. for strengthening primary health care through a mechanism of 'shared care' is to be piloted in 4 districts. The organization changes are coordinated in collaboration with the primary care services unit.

Improvements in central organization to coordinate human resources in health require preparatory work which is being coordinated by the Organization Development Unit. To improve understanding within the organization the Human Resource in Health Strategic plan will be printed and circulated.

2.4.5 Governance System

The Organization Development Unit aims to strengthen the existing hospital management and public health systems. The steps being taken are,

a. Facilitation of technical discussions to revise the job descriptions for selected categories of public health staff & administrative staff.

b. Revision and publication of health manuals to strengthen health care delivery system, to support management of healthcare institutions at different levels.

2.5 Planning Unit

The Planning Unit has been functioning to facilitate the planned development of health services. In this context the implementation of Annual Health Action Plan for the year 2014 was monitored and 2015 plan was prepared. Approval was received for the revised cadre of Ministry of Health & Indigenous Medicine from the Department of Management Services. It included the recruitment of 810 new Development Officers for strengthening of the health workforce. In addition , other health staff categories such as Medical Officer, Nursing Officer, Para-Medical and technical staff have been increased for provision of better healthcare services to the public.

The Planning Unit was also involved in the implementation and coordination of Global Alliance for Vaccines & Immunization – Health System Strengthening (GAVI HSS) Programme. This programme was started in 2008 and was continued until the end of 2014. Under this programme, the infrastructure facilities at Maternal and Child Health (MCH) clinic centres in Northern Eastern provinces that comprise of 08 districts and 02 districts that encompass the estate sector from Uva and Central Provinces, 07 Regional Training Centres and National Institute of Health Sciences, Kalutara were developed. In those 10 under served districts, the primary health care staff and supervisory level staff were trained. Motor bikes were provided to Public Health Midwives and Public Health Inspectors. Total expenditure of the programme in 2014 was Rs. 107.90 millions.

The Planning Unit was instrumental in establishing Planning and Development Units in hospitals. In 2014, the Planning Unit conducted a series of discussions to identify the roles and functions of hospital Planning and Development Units.

2.6 Healthcare Quality and Safety

With a vision to be the centre of excellence in facilitating the provision of the best quality and safe health services to the Sri Lankan population, the Directorate of Healthcare Quality & Safety functions as the central body, coordinating activities related to the implementation of Quality Assurance Programme island wide.

With the involvement of all stakeholders, the Directorate march towards the coveted third year of its existence, with the aim of establishing a *centrally driven, locally led, clinically oriented and patient centered continuous quality improvement programme* within the health system of the country.

2.6.1 List of Major Achievements in Year 2014

The establishment of fully-functioning Quality Management Units in health institutions (Base Hospitals and above) is the Disbursement-Linked Indicator (DLI) related to Healthcare Quality & Safety. Accordingly, 16 line ministry institutions were selected for this purpose in year 2014 and the achievement of DLI was 100% in year 2014.

√ Establishment of fully functioning Directorate of Healthcare Quality & Safety
- Procurement of furniture and other equipments such as computers, printer machines and photocopy machines to the Directorate
- Recruitment of adequate staff to the Directorate for smooth functioning

√ Introduction of a National Policy on Healthcare Quality & Safety
- Carrying out 05 consultative workshops to develop policy
- Publication of draft policy for comments/ suggestions
- Finalization and translation to Sinhala and Tamil languages
- Cabinet approval

√ Preparation of trainers manual for master trainers in Healthcare Quality & Safety
- Appointment of a working group
- Consultative meetings of the members of working group
- Making the draft TOT manual
- Finalizing the manual
- Translation into Sinhala and Tamil languages

√ Training of master trainers in Healthcare Quality & Safety
- Development of 14 master trainers from Southern and Northern provinces (07 from each province)

√ Establishment of District Healthcare Quality & Safety (HQS) Units in RDHS areas and Quality Management Units (QMU) in line ministry institutions
- Finalizing the functions and responsibilities of District HQS units and QMUs in hospitals
- Conducting situational analyses
- Purchasing equipments and furniture
- Carrying out workshops on 'Introduction to Quality Assurance' to top and middle level managers of 10 selected hospitals

√ Conducting a workshop on Introduction of Disbursement Linked Indicators (DLI) of Healthcare Quality & Safety of the Second Health Sector Development Program under World Bank funds to heads of all line ministry institutions

√ Provision of logistics for initial quality management activities in hospitals

√ Conduction of training programmes on 'Quality Assurance in Health Care' to senior and middle level health managers of selected hospitals for monitoring purposes of DLI

√ Introduction of 20 health indicators related to Healthcare Quality & Patient Safety and the assurance of achievement of at least 05 selected indicators 100% by all line ministry institutions

√ Introduction of the surgical safety checklist

√ Conduction of third country group training programme on '5S-CQI-TQM Implementation' in Sri Lanka
- Conducted for 19 participants from 09 developing countries

√ Introduction of indicators related to hospital acquired infections
- Workshops conducted to sensitize heads of institutions, medical officers and nursing staff on hospital acquired infections
- Calculation tools introduced
- Implemented via a general circular

√ Introduction of hand hygiene tools
- Workshops conducted to sensitize on hand hygiene tools and methods of calculation
- Introduced via a circular

√ Finalization of Adverse Event Reporting Format and Hospital Readmission Format

√ Introduction of an accreditation system to the health care service of Sri Lanka
- National Council on Accreditation on Health Care in Sri Lanka (NCASL) established
- Proposal finalized and approved

2.7 Health Facilities

The network of curative care institutions ranks from Teaching Hospitals with specialized consultative services to small Primary Health Care Units which provide only outpatient services.

At the end of the year 2014, there were 622 government sector medical institutions with indoor health facilities. It includes 16 Teaching Hospitals, 3 Provincial General Hospitals, 20 District General Hospitals, 69 Base Hospitals categorized as type A and B, 470 Divisional Hospitals categorized as type A, B and C and 18 Primary Medical Care Units with Maternity Homes.

In 2014 there were 338 MOH Offices headed by Medical Officers of Health, carrying out preventive services in Sri Lanka.

The total bed strength of the said institutions is 80,105. That is an increase of 2.4% compared to the previous year. The total bed strength of Teaching hospitals is 20,008.

There are few specialized hospitals for the treatments of chronic diseases such as tuberculosis, leprosy, cancer, mental illnesses, etc.

There were 475 Primary Medical Care Units which have only outdoor and clinical facilities. Other than that there are 18 Primary Medical Care Units which have limited indoor facilities only for maternal services and the total bed strength is just 271 (Detailed Table 7).

Table 2.2 shows the availability of average number of the patient beds in the above mentioned hospital categories.

The highest hospital bed strength was recorded in Colombo (14,191) followed by Kandy Regional Director of Health Service area (6,991). Mullaitivu Regional Director of Health Service area recorded the lowest bed strength (513) followed by Kilinochchi with a bed strength of 609.

The largest function of the healthcare delivery system in the island is performed by the National Hospital of Sri Lanka. It maintains its services in various specialties, including a well equipped accident service, a cardiology unit and several intensive care units. It excludes dental, maternal, paediatrics and eye specialities where as for those specialties there are separate teaching hospitals in closer locations.

The national ratio of beds for inpatient care is 3.9 per 1,000 population.

The highest number of beds per 1,000 population is reported to be 7.8 from Mannar and the next highest is from Colombo which is 6.0.

The lowest rate was reported from Kalutara (2.4) followed by Gampaha, Puttalam and Nuwara Eliya (2.6).

Fig 2.2 : Beds per 1,000 Population by Districts, 2014

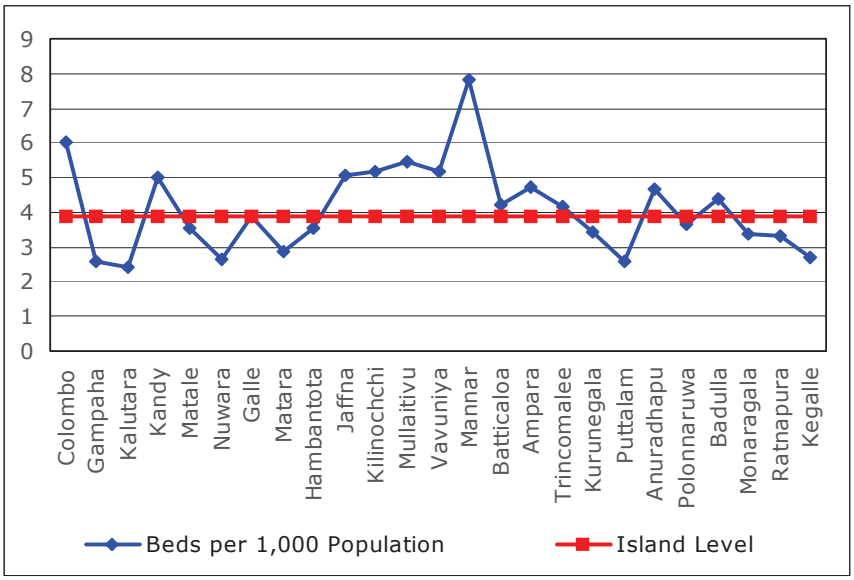


Table 2.1 : Number of Health Institutions and Hospital Beds, 2005 - 2014

Item	2005	2006	2007	2008	2009	2010	2011 *	2012	2013	2014
Hospitals [1]	608	608	615	647	642	630	641	621	624	622
Hospital Beds [1]	61,594	67,024	68,694	67,942	70,842	72,510	74,370	76,087	78,243	80,105
Hospital Beds per 1,000 Population	3.2	3.4	3.4	3.4	3.5	3.5	3.6	3.8	3.8	3.9
Central Dispensaries/Primary Medical Care Units	413	428	441	439	443	464	463	487	461	475
MOH Areas	286	288	291	298	303	327	328	337	334	338

[1] Includes Maternity Homes and Central Dispensaries

*Provisional

Source: Medical Statistics Unit

Table 2.2 : Availability of Hospital Beds by Type of Institution, 2014

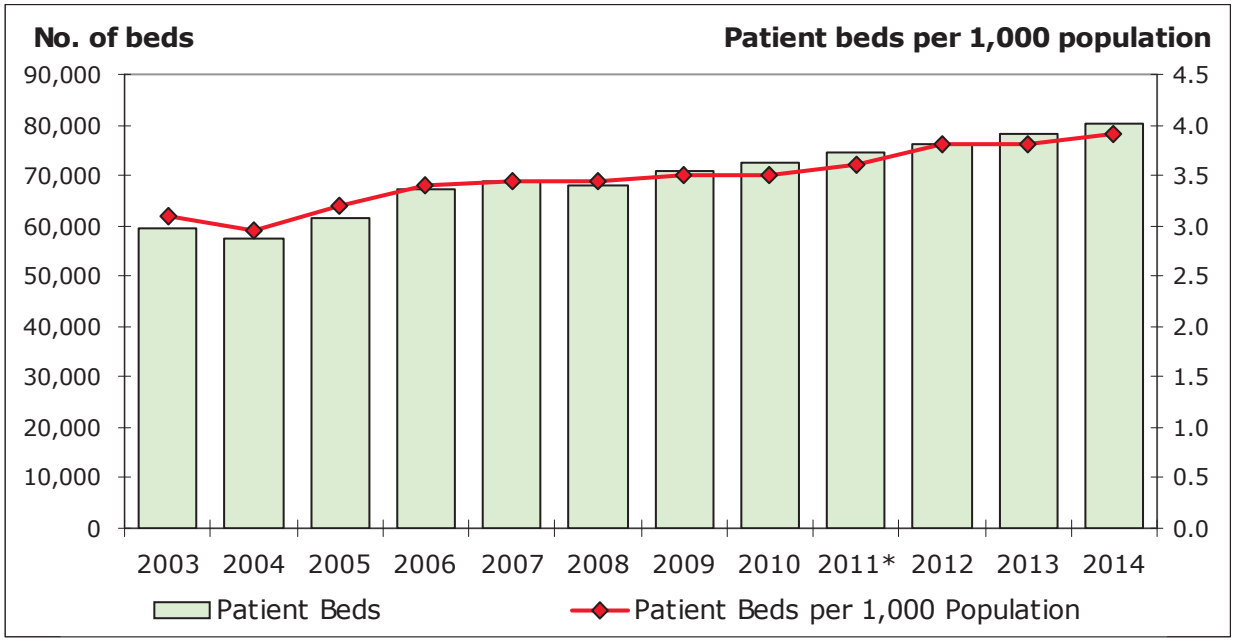
Type of Institution	Total Number of Institutions	Hospital Beds (Range)	Average Number of Hospital Beds	Number of Hospitals Having Less than Average Number of Hospital Beds
Teaching Hospitals	16	267 - 3,423	1,250	10
Provincial General Hospitals	3	1,242 - 1,846	1,527	2
District General Hospitals	20	98 - 1,048	588	9
Base Hospital Type A	21	120 - 646	371	13
Base Hospital Type B	48	21 - 393	166	29
Divisional Hospital Type A	45	53 - 225	109	23
Divisional Hospital Type B	134	24 - 110	70	72
Divisional Hospital Type C	291	2 - 70	30	143
Primary Medical Care Unit and Maternity Homes	18	8 - 32	15	11
Other Hospitals *	26	3 - 1,507	218	20

* Includes Cancer, Mental, Dental, Millitary, Police and Prison Hospitals

Source : Medical Statistics Unit

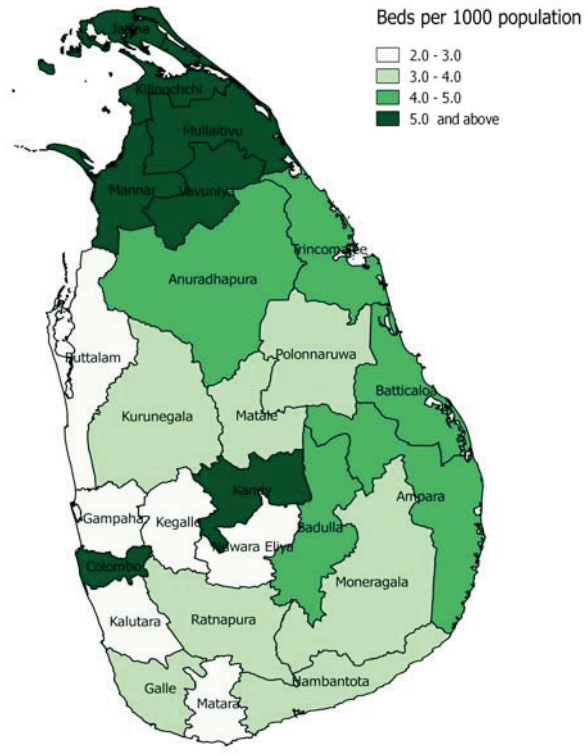
Note : Average number of hospital beds was calculated based on the number of institutions from which data is received.

Fig 2.3 : Number of Beds and Hospital Beds per 1,000 Population, 2003 - 2014



* Provisional

Fig 2.4 : Distribution of Hospital Beds by District, December 2014



All the districts in Northern and Eastern provinces have reported higher rates of beds per 1,000 population compared to the island figure, while lower rates are reported from all the districts in North Western and Sabaragamuwa provinces. That has occurred due to the lower population in the Northern and Eastern provinces.

2.8 Health Manpower

The total number of Medical Officers has increased to 17,615 in 2014. Accordingly, medical officers per 100,000 population has also been increased. In 2013 this figure was 81 and it is 85 in 2014. (Detailed Table 9)

There were 7 districts which have more than 85 medical officers per 100,000 population. Those are Colombo, Kandy, Vavuniya, Mannar, Ampara, Jaffna and Galle. It was 186 in Colombo and 118 in Kandy. The minimum rate was reported from Nuwara Eliya as 38 followed by Ratnapura with the rate of 57.

Total number of nurses were 38,451 in 2014. There were 174 nurses per 100,000 population in 2013 and it is 185 for 2014.

Although the national figure is 185, there are 6 districts which had been able to maintain a higher rate than that. The minimum was 44 from Mullaitivu. All the districts in Northern, Uva, Sabaragamuwa and North Western provinces have lower rates than the national figure.

Fig 2.5 : Distribution of Medical Officers (MO), December 2014

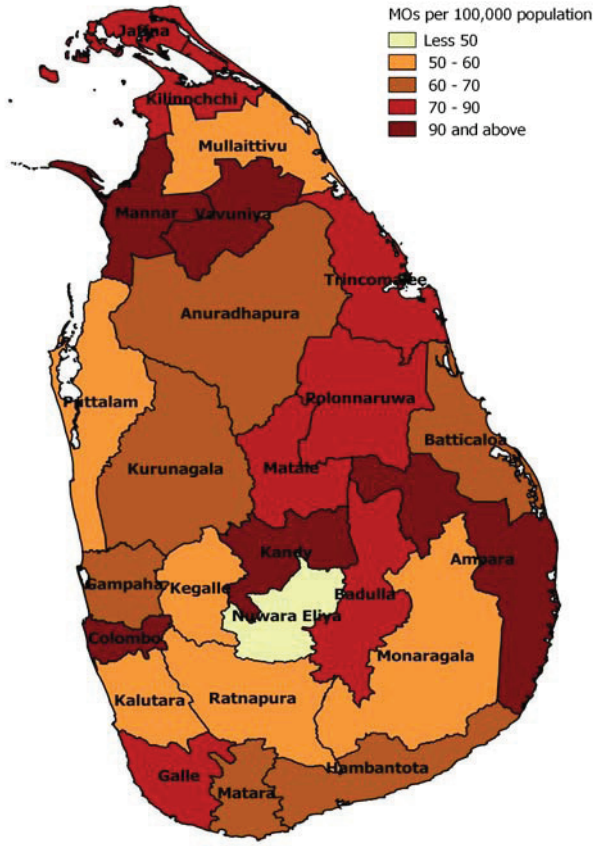


Fig 2.6 : Distribution of Nursing Staff, December 2014

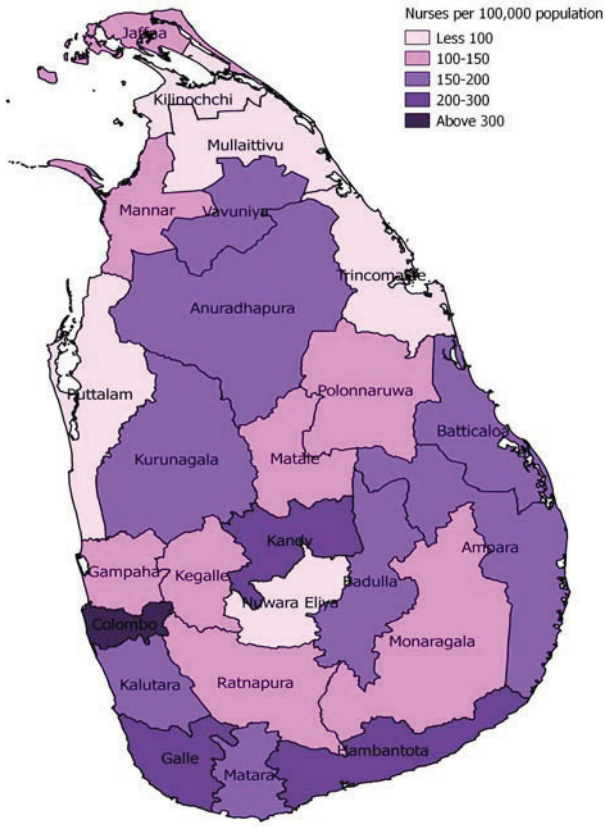


Fig 2.7 : Distribution of Public Health Midwives (PHM), December 2014

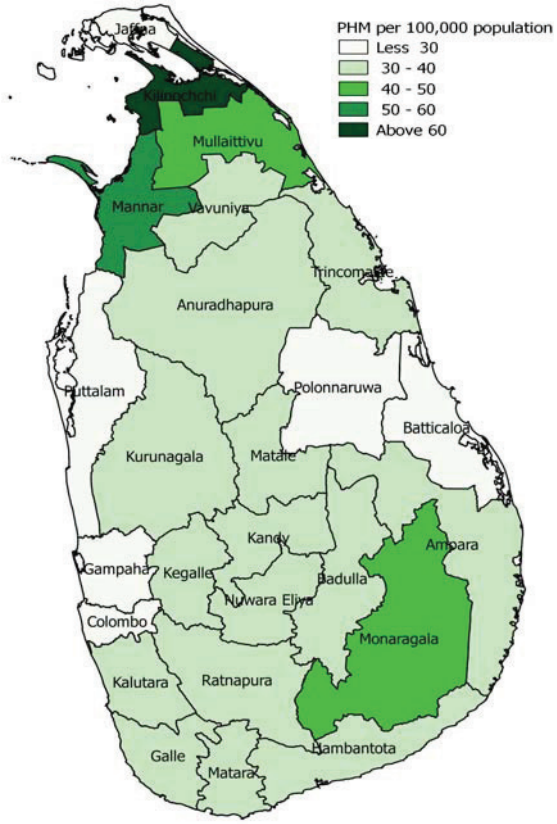
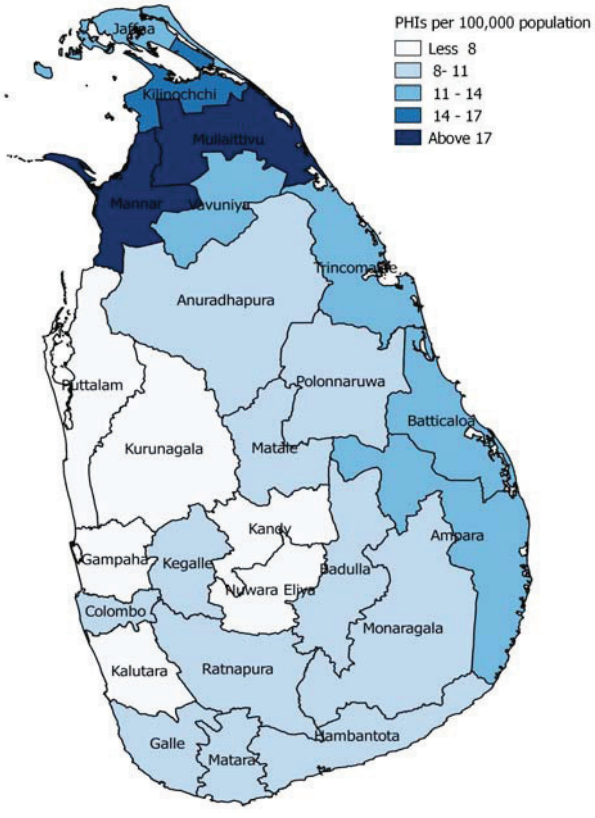


Fig 2.8 : Distribution of Public Health Inspectors (PHI), December 2014



2.9 Medical Services Division

2.9.1 Deputy Director General (Medical Services) I

The Division of Deputy Director General (Medical Service) - I; DDG (MS) - I, caters to a wide range of services pertaining to intern medical officers, post graduate trainees, specialist medical officers and medical administrators. Yearly more than 1,000 intern medical officers are appointed and around 3,000 postgraduate trainees are following around 50 different specialities ranging from Diplomas, Masters Degrees and Doctoral Studies (MD). Nearly 1,600 specialists medical officers are providing specialist care for the nation and 280 medical administrators are distributed in health institutions at different levels of care: Base Hospitals, District General Hospitals, Provincial General Hospitals and Teaching Hospitals. In addition, the National Transplant Programme (NTP) in the government sector falls under the direct purview of DDG (MS) I.

Development of tertiary level medical facilities in major hospitals and other institutions including establishment of necessary infrastructure facilities, provision of medical equipments and providing administrative support are major functions of the division.

2.9.1.1 Directorates under the Purview of DDG (MS) I

There are four directorates under the purview of DDG (MS) I

Tertiary Care Services (TCS)
Health Quality and Safety (HQ&S)
Registered Medical Officers (RMO)
Nursing - Medical Services (Nursing-MS)

2.9.1.2 Some of the Main Duties Performed by the Deputy Director General (Medical Services) I and its Directorates

√ Tertiary Care Services (TCS)

- Overseas Training, recruitment and deployment of all medical specialists in the government health services
- Recruitment and deployment of medical administrators
- Post graduate training of the medical professionals (PG Trainees)
- Internship training of medical graduates from Sri Lanka and abroad
- Management of issues in relation to relief house officers and specialists
- Management of all human resource related issues of Teaching Hospitals and specialized institutions

These services are provided on a web based platform for easy access.

√ The directorate of Healthcare Quality and Safety (HQ&S) has established a standard island wide programme to improve the quality of care, introducing a national set of twenty indicators. All hospitals are required to measure the indicators and also to conduct a patient satisfaction survey at least annually. Introduction of surgical safety checklist in all hospitals is another milestone achieved in improving patient safety.

2.9.1.3 Priorities under DDG (MS) I for 2014

1. Establishment of regional transplant ethics committees
2. Accreditation of healthcare institutions
3. Capacity building of medical administrators (Scaling up medical administrative abilities for innovative management)
4. Improve web based management information system for tertiary care services
5. Upgrading of services of all hospitals above the level of Base Hospitals Category B

2.9.2 Deputy Director General (Medical Services) II

2.9.2.1 Directorates under the Purview of DDG (Medical Services) II

- Medical Services
- Primary Care Development
- Private Health Sector Development
- Medical Service Administration
- Blood Transfusion Service
- Prison Medical Service

2.9.2.2 Scope

Supervision and coordination of medical care service and human resource management functions of medical officers in government health service other than production, disciplinary actions and termination.

2.9.2.3 Vision

Dedicated and satisfied medical officer work force contributing for more attractive, quality and productive medical care service.

2.9.2.4 Mission

Achieved through supervision and coordination of medical care service as well as the implementation of well developed plan on human resource management system in relation to the category of medical officers in view of providing better health care service leading to satisfaction of patients with the support of dedicated and satisfied office staff.

2.9.2.5 Objectives for 2014

1. To streamline routine activities of central level Medical Service Branch with the support of relevant stakeholders in order to achieve satisfied medical officer work force
2. To strengthen medical service through development of physical and human resource aspect of curative care institutions
3. To strengthen medical service through organizational development of curative care institutions
4. To strengthen medical service with evidence based management

Following are the expected output to be achieved through the identified strategies and activities based on above mentioned objectives.

- Timely completed routine functions adhered to prepared time schedule by preparing a data base of vacancies.
- Fulfill the requirement of Medical Services Unit with adequate infrastructure (furniture and IT equipments) and well equipped the staff in office management and IT management.
- Revise norms and cadre of grade MOs while reviewing and defining standards of each facility in each level by completed facility survey in all levels of institutions. Complete development plans for identified hospitals in secondary and tertiary care based on the gaps identified by facility survey, complete development plans for identified primary care institutions in view of achieving well utilized primary care institutions catering to current needs and demand.
- Establishment of a HR data base system for proper human resource management and development of medical officers.
- Establishment of productivity, quality and safty improvement programme to improve a system for preparedness & management of disaster while improving a system for preparedness & management of injury.

2.9.2.6 The Main Responsibilities

1. Supervision and coordination of the health institutions
2. Organizing the hospital directors meeting for reviewing and coordination in curative care institutions in every two months time
3. Providing facilities and doctors for mobile health services
4. Facilitating the progress review meetings, Provincial Director's meetings and the parliamentary select committee decisions
5. Organizing the medical facilities for visits of state heads and other VIP's
6. Attending for hospital inspections and supervision
7. Conducting and attending the legal and disciplinary matters of the doctors and attending the complaints from public and hospital staff
8. Look into the public complaints and other medical or non-medical requests
9. Implementing the recommendations sent by the Human Right Commission, Public Service Commission and courts
10. Monitoring and coordination of private sector health service

2.9.2.7 Human Resource Management Functions of Medical Officers in Government Health Service

1. Appointing the diploma holders, MSc holders and other post graduates following the release from the PGIM
2. Recruitments of post intern medical officers, preparation and advertising the vacancies, calling the applications, taking the necessary steps to get the approval of the Public Service Commission and Management Service Department, issuing the formal appointment letters

3. Handling and managing prepared personal files
4. Appointing the post intern medical officers for the training programmes
5. Organizing and coordination of the training programmes for grade medical officers
6. Implementing the transfers for the north and east provinces
7. Facilitating the administrative affairs of the medical officers with secondment to the security forces specially with regard of the extra duties payments, travelling and other allowances
8. Attending to all the necessary steps with regard of the annual transfers of the medical officers
9. Arrangements of temporary attachments for the medical officers for their personal problems
10. Attending to the medical officers who have personal issues at their special appeals and implementation of the special appeal transfer board orders
11. Advertising the special post vacancies requested from certain hospitals/special units as per the service needs
12. Appointing medical officers for special posts in external institutions

2.9.2.8 Attending for System Development of Curative Care Service and HRM of Medical Officers

- Attending to affairs regarding the improvements/developments of the accident and emergency care services
- Preparation of the data base for the medical officers
- Organizing training programmes for the medical officers
- Facilitating the functions of hospital based Sports Medical Units, Health Information Management Unit and Reproductive Health Service Unit
- Providing annual funds for development activities of various health related institutions
- Development of prison health care

2.9.2.9 Progress and Achievements in year 2014

1. Appointing 1,420 medical officers in 2 batches who completed their internship in 2013 and 2014 to island wide institutions in all provinces for opening of new units and closed institutions
2. 2,567 Annual transfer orders have been implemented on 1st of January, 2014 as per the Public Service Commission guidelines
3. Establishment of Sports Medical Units for every General Hospital
4. Initiation of improvement of the facilities of the emergency treatment services in all hospitals as a new system development for A&E care service
5. Implementation of the Human Resource Information Management System (HRIMS) for the medial officers for transfers, appointments and grade promotions
6. Transfer orders of 40 medical officers of North & East and 436 special appeal transfer orders have been considered during 2014

2.9.2.10 New Projects and Achievements under the Supervision of Deputy Director General (Medical Services) II

1. Annual Transfer Revitalization Project
2. Accident and emergency service development
3. Sports medical service development
4. Costing programme for curative care institutions
5. IT Solutions Development Project for medical services
   - Health Institutions Facility & Performance Database (Health Net)
   - Health Management Information System
   - Further expansion of Human Resource Management Information System
6. Primary care service development with extended specialists service to the primary health care level
7. Private health sector development

2.10 Director Nursing (Public Health Services)

2.10.1 Post Basic College of Nursing (PBCN) – Sri Lanka

This is the higher education center for nurses attached to NHSL, under the administration of ETR unit; Ministry of Health, Sri Lanka. It produces nurse managers & nurse educators to improve the quality in national health care sector. Further, it conducts nursing specialty courses for registered nurses. Simultaneously, PBCN acts as a facilitator/coordinator for the nursing related courses conducted at national and international level.

Table 2.4 : Statistics of Human Resources

S. No	Category of Personnel	Approved 31/12/2013	Present Strength 31/12/2014
1	Principal	1	1
2	Senior Nursing Tutors	12	12
3	Librarian	1	-
4	Public Management Assistants	3	-
5	Development	1	1
6	KKS	1	1
7	Saukya Karya Sahayaka (Ordinary)	6	1
8	Saukya Karya Sahayaka (Junior)	2	1
Total		27	17

Table 2.3 : Trainings Conducted

	Title	Level	Duration		Number of Trainees			
			Institutional Training	Clinical Training	2011	2012	2013	2014
Courses Conducted	Operating Theater Nursing	Certificate	3 months	3 months	197	-	82	-
	Pediatric Nursing	Certificate	3 months	3 months	-	69	-	87 (1st Batch) 52 (2nd Batch)
	Intensive Care Nursing	Certificate	3 months	3 months	-	150	220	-
	Emergency Nursing	Certificate	6 months	6 months	-	-	-	28
	Midwifery Training	Certificate	6 months	6 months	-	-	-	-
	Teaching & Supervision in Nursing Education	Diploma	1 year	-	-	-	-	-
	Management	Diploma	1 year	-	-	-	-	-
	Mental Health & Psychiatric Nursing	Certificate	-	-	-	-	-	-
	Conducting Institute: School of Nursing; Mulleriyawa	Certificate	6 months	6 months	-	63	53	-
	Nurse Intensive Care Training Skills (NICS)	Certificate	-	-	-	-	-	-
Courses Facilitated	Diabetic Educating Nursing Officer	Certificate	-	-	-	-	-	-
	Infection Control Nurse Training	Certificate	-	-	-	-	-	-

2.10.2 Post Graduate Institute of Medicine (PGIM)

The Post Graduate Institute of Medicine (PGIM) was established by the PGIM ordinance No.01 in 1980 and was affiliated to the University of Colombo. This institute is providing instructions, training and research in 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, Master of Science, Post Graduate 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 three years towards the development of specialist doctors needed by the country.

2.10.2.1 Performance in 2014

1. PGIM conducted 113 different examinations including Selection/Post Graduate Diploma/ MSc/MD examinations in addition to the in-course assessments.

2. New courses were not started in year 2014, but action was taken to prepare the prospectus for the following new training programmes in order to implement in future.
   - MD and Board Certification in Sports Medicine
   - MD and Board Certification in Elderly Medicine
   - MD and Board Certification in Health Information
   - MD and Board Certification in Nutrition
   - Board Certification in Heamato-Oncology
   - Postgraduate Diploma in Palliative Care

3. Curricula/prospectuses of following existing programmes were revised during the course of this year.
   - MD and Board Certification in Otorhinolaryngology
   - MD and Board Certification in Ophthalmology
   - MD and Board Certification in Radiology
   - MD and Board Certification in Restorative Dentistry
   - MD and Board Certification in Psychiatry
   - MD and Board Certification in Venereology
   - MD and Board Certification in Clinical Haematology
   - Board Certification in Orthodontics
   - Board Certification in Neurology
   - Board Certification in Paediatric Pulmonology
   - Board Certification in Paediatric Endocrinology
   - Board Certification in Neonatal and Perinatal Medicine
   - MD in Community Medicine/Community Dentistry
   - Postgraduate Diploma in Legal Medicine
   - Postgraduate Diploma in Haematology

4. Graduate output during the year 2014

PG Certificate	- 96
PG Diplomas	- 228
MSc	- 104
Doctor of Medicine (MD)	- 265
Board Certification	- 207

5. New entrance for year 2014

PG Certificate	- 29
In-service	- 31
PG Diplomas	- 362
MSc	- 69
MD	- 364

6. Institution of Ethical Review Committee
7. Conducted workshops for trainers/examiners (10 workshops)
8. Conducted workshops for trainees (15 workshops)
9. Research/Theses/Dissertations done by PG trainees in year 2014

Researches	- 0
Theses	- 23
Dissertations	- 109

2.11 National Intensive Care Surveillance (NICS)

National Intensive Care Surveillance is a critical care registry networking with more than 80 Intensive Care Units (ICUs) in government hospitals of Sri Lanka. It is a collaboration of national and international organizations led by the Ministry of Health and maintains a critical care registry and operates a 24/7 ICU bed availability service for adult, children and now neonates.

The main objectives are:

1. To setup a national critical care clinical registry in Sri Lanka
2. To design a critical care bed availability/ information system
3. To provide feedback/reporting to the participating ICUs to improve quality of care
4. To contribute to the development of a network of multidisciplinary health care professionals working to improve Intensive Care Medicine (ICM) in Sri Lanka

NICS system is involved in gathering, cleaning, analysing and disseminating information from ICUs regarding patients, staffing, beds and other available resources. In addition, NICS captures information to enable benchmarking of ICUs relative to how ill ICU patients are (severity scoring) using standard severity scoring algorithms such as Acute Physiological And Chronic Health Evaluation (APACHE) II, IV and Nine Equivalents of nursing Manpower Score (NEMS). The system also makes it possible to assess 30 day post ICU outcomes and quality of life of critically ill patients.

The benefits from NICS includes; having an ICU bed availability system (24/7), enables planning ICU services based on needs, capacity and resources, helps coordinate ICU resource management during any national/regional emergency or disaster, improve quality of patient care, improve cost effectiveness of critical care, capacity building of critical care personnel, promotes local and international audits/research.

NICS is presently under the administration of Director, Tertiary Care Services of Deputy Director General (Medical Services) - I.

- NICS is involved in training of doctors, nurses and physiotherapists in critical care skills, research and IT. During the year 2014 in collaboration with the Deputy Director General (Education, Training & Research), it has conducted training sessions for more than 1,000 health care personals.
- NICS collaborates with many organizations and individuals to conduct research. During 2014 it had carried out nearly 10 research projects.
- NICS also supervises research students of postgraduate programmes and provide placement for interns from University of Colombo.

2.12 Health Finance

The government earmarked a major share of its investment for health with an overall policy objective of delivering quality and modern healthcare services particularly to underserved areas. The total investment on health in 2014 was Rs.155 billion, indicating an increase of 29 percent over 2013 with a growing share at both the national and provincial levels.

Investment in curative health care services have been significantly increased during 2013-2014. In addition, the construction of maternity ward complex at Teaching Hospital-Kurunegala at a cost of 1,266 million, under the assistance of Netherlands and development of District General Hospital-Hambantota and District General Hospital-Nuwara Eliya are some of the major development projects implemented in 2014.

Meanwhile funds were provided in 2014 for the construction of accident services at District General Hospital-Rathnapura, construction of drug stores for Medical Supplies Division at Mulleriyawa, construction of accident service and ward complex for Teaching Hospital-Ragama, construction of new medical ward complex at District General Hospital-Chilaw and establishment of Epilepsy Unit at National Hospital-Colombo. Above tasks were completed under the assistance of Saudi at a cost of Rs. 1,745 million. Construction of proposed millennium ward complex at Teaching Hospital-Kalubowila was completed at a cost of Rs. 398 million. Completed 200 beded ward complex at Vauniya Hospital under the assistance of India. Constructed National Stroke Center at Base Hospital-Mulleriyawa while initiating Helmut Khol Maternity Hospital-Karapitiya, Galle with the assistance of Germany.

Further, the expenditure on medical equipments for government medical institutions have been increased by 17 percent over 2013 to Rs. 3,235 million in 2014 to meet the cost escalations and needs of emerging of new medical units.

The assistance given to health promotion and disease prevention was continued in 2014. A greater emphasis was given to control the epidemic of kidney diseases while conducting preventive programmes on Chronic Kidney Diseases (CKD).

The investment in traditional system of medicine namely Ayurveda and other indigenous systems, has been increased from 2014 and it was Rs. 1,179 million in 2014.

2.12.1 Resource Mobilization in Health

Annually a major share of health expenditure is channeled to meet the recurrent expenditure while providing a substantial increase of funds on capital expenditure.

The capital investment on health has increased from Rs. 19 billion in 2013 to Rs. 24 billion in 2014. These funds were mainly used for curative health care and hospital development. The total capital expenditure on health is largely finance from domestic funds. The foreign assistance contribution was mostly for construction and it was 7 percent from total investment although it was more than 40 percent from capital investment.

In addition to hospital development projects, a major share of capital investment has also been channeled for hospital rehabilitation, medical equipments, etc. Further a total capital investment of Rs. 3,121 million was provided to carry out new initiatives to control communicable and non communicable diseases with domestic as well as foreign assistance.

Out of the total recurrent expenditure on health, a bulk has been channeled for medical supplies, hospital maintenance and payment of salaries.

2.13 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.

Medical Statistics Unit collects, compiles and publishes statistics mentioned below.

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

MSU is also responsible for 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 who are handling data in hospital record rooms and carry out hospital reviews to identify data lapses.

In addition, MSU prepares the population estimates for all Medical Officer of Health (MOH) areas. Also the unit maintains a list of health institutions and update it every year.

Since 1960, MSU has collected data using manual systems and published Annual Health Bulletins from 1980 to 2013 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 designed to facilitate collection, storage, analysis and dissemination of inward patients statistics which will improve efficacy, efficiency and accuracy of the mannual system.

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 who were following a MSc in Biomedical Informatics (BMI) 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. They were Lady Ridgeway children's Hospital, Castle Street Womens Hospital, De Soyza Hospital, Sri Jayawardenepura Hospital, Base Hospital-Panadura and 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 system. The secretary of Health has issued a general circular mentioning the guidelines for implementation of eIMMR.

In 2012, Medical Statistics Unit initiated the implementation of the electronic version of Indoor Morbidity and Mortality Reporting system (eIMMR). During the year 2014, 26 training programs in all RDHSS as well as two ICD training programs were conducted to train the staff handling the hospital statistics.

At the end of 2014, system is being used in about 31 percent of total hospitals in the country. It is also important to note that 55 percent of IMMR data is now being produced through eIMMR. It has helped to reduce the time taken for publication of Annual Health Bulletin. The implementation of the eIMMR was selected as two of the nine Disbursement Linked Indicators (DLI) of the second Health Sector Development Project (HSDP) of the World Bank. The targets given for 2014 was satisfactorily achieved during the year. Scaling up of the system was expedited with the funds coming in from the second Health Sector Development Project.

3. Morbidity and Mortality

3.1 Introduction

3.1.1 Introduction of Morbidity

Morbidity refers to the state of being diseased or unhealthy within a population. In other words morbidity is an incidence of ill health in a population. Morbidity information reflects the disease patterns of the population. Morbidity data is collected according to the disease type, gender, age and area of hospitalization.

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 are incidence rates and prevalence rates.

3.1.2 Introduction of Mortality

"Mortality data indicate number of deaths by place, time and cause." (http://www.who.int/topics/mortality/en/).

In demography, mortality is usually refers to the incidence of death or the number of deaths in a population. It plays a vital role in determining the size, growth and structure of population. It is considered as the most striking demographic event all over the world.

Mortality trends reflect health conditions 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.

Furthermore, collection 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 compare the mortality patterns between sub populations
e) To identify the demographic, social, economic, behavioral and environmental 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, maternal mortality rate, child mortality rate, standardized mortality rate and age specific mortality rate. Various indicators are computed using both morbidity and mortality information such as cause-specific death rates and case fatality rates, etc.

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 censuses or surveys.

In Sri Lanka, the hospital mortality information is 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 is also collected from the vital registration system and it was established in 1867. It was actually implemented 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.

3.2 Hospital Morbidity and Mortality

In Sri Lanka, morbidity data is available only on patients seeking treatment as inpatients from government hospitals providing western medicine. Morbidity data of patients attending in the outpatient departments of government hospitals are not available. Data from the private sector are also not routinely collected. All the Ayurveda institutions both government and private sectors are not still absorbed into the data collection system. There are some other limited information collecting systems through surveys, registers maintained by the special campaigns and programmes for control of diseases such as TB, Cancer and Leprosy, etc.

The Indoor Morbidity and Mortality Return (IMMR) is the main source of morbidity data. This return is collected quarterly from all government hospitals by the Medical Statistics Unit, except from the Primary Health Care Units and Maternity Homes. The IMMR used since 1996 is based on the 10th revision of the International Classification of Diseases (ICD-10 version). Since 2012, MSU has introduced a web based system called eIMMR to collect morbidity and mortality data. Hospitals which have computer and internet facilities can send their data through eIMMR. Accurate, detailed and timely data collected through eIMMR by more than two hundred hospitals are processed and published in this report.

3.2.1 Hospital Morbidity

The final diagnosis as mentioned in the Bed Head Tickets (BHT's) of the patients are recorded in a formal register, and then summarize to complete the IMMR return. Hospitals which sent data through eIMMR can directly enter the final diagnosis of patient into the system and system generates the IMMR report. It is a duty to be performed by a medical recording officer in the hospital record room or the hospital statistics unit. However, since there are limited number of qualified medical recording officers in the system, other staff categories such as medical recording assistants, planning and programming officers, planning and programming assistants, programming officers, programming assistants, development officers, development assistants, etc. in hospitals are involving in the said activity. Registered/assistant medical officers or sometimes medical officers, also engaged in compilation of inpatient statistics in the hospitals. Though these officers are mainly employed to attend in the patient care, they perform the statistical activities as an additional duty.

During the year 2014, in government hospitals, 6.06% of the live discharges and 9.9% of the deaths are reported as undiagnosed or uncoded. To improve the data quality, number of undiagnosed BHT's should be minimized.

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.

Detailed Table 16 gives trends in hospital morbidity and mortality by ICD broad disease groups for the period 2006 – 2014.

As shown in the said table, some disease groups such as endocrine, nutritional and metabolic diseases (E00-E90), mental and behavioural disorders (F00-F99), diseases of the nervous system (G00-G99), diseases of the respiratory system (J00-J99), pregnancy, childbirth and the puerperium (O00-O99) and congenital malformations, deformations and chromosomal abnormalities (Q00-Q99) are reported a slight decrease from 2013, but certain infectious and parasitic diseases (A00-B99) have shown a continuous decrease from 2009. Hospitalizations due to neoplasms (C00-D48), diseases of the blood & blood-forming organs & cetain disorders involving the immune mechanism (D50-D89), diseases of the ear and mastoid process (H60-H95), diseases of the circulatory system (I00-I99) and diseases of the digestive system(K00-K93) has been increased from 2009.

In spite of the effort taken to improve the quality of the final diagnosis and cause of death in the patient records, the group named symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified, has still increased.

For the year 2014, 6,073,053 live discharges and 47,417 deaths have been recorded in government hospitals. 49% out of the live discharges and 59% out of the deaths are males. (Figure 3.1)

Group of traumatic injuries (S00-T19, W54) has been the major cause for hospitalization and reported 907,241 cases.

But on the other hand, out of total hospitalizations due to traumatic injuries, the percentage of deaths is just 0.17. As shown in Figure 3.2 gender difference is high in hospitalizations as well as in deaths due to traumatic injuries. When concerning total live discharges due to traumatic injuries 66 percent are male and out of total deaths due to injuries 77 percent are male.

Fig 3.1 : Percentage of Hospital Live Discharges and Deaths by Gender, 2014

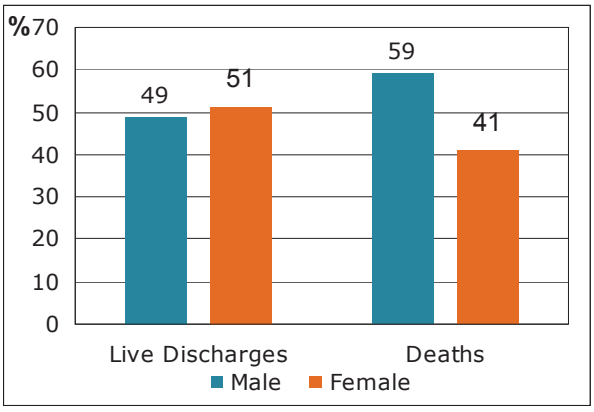
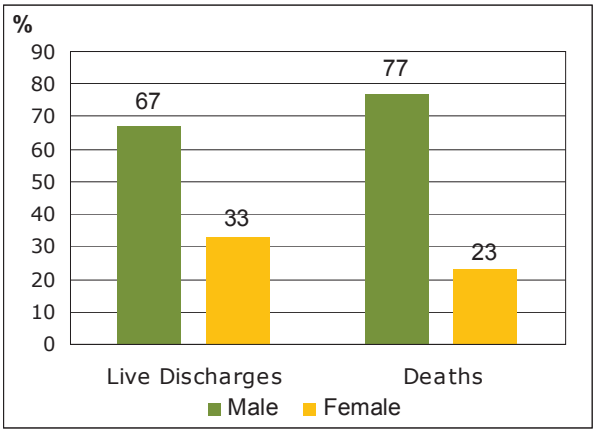


Fig 3.2 : Percentage of Hospital Live Discharges and Deaths from Traumatic Injuries by Gender, 2014



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

- Ischaemic heart diseases (506.1 per 100,000 population in 2013 and 524.3 in 2014)
- Anaemias (111.9 per 100,000 population in 2013 and 121.7 in 2014)
- Septicaemia (38.1 per 100,000 population in 2013 and 44.2 in 2014)

3.2.1.1 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 2003-2014. There is no change in the ten leading causes of hospitalization for 2014 compared with 2013, except for the change in the rank position of two diseases.

Traumatic injuries ranked as the major cause of hospitalization over last ten years as well as in 2014.

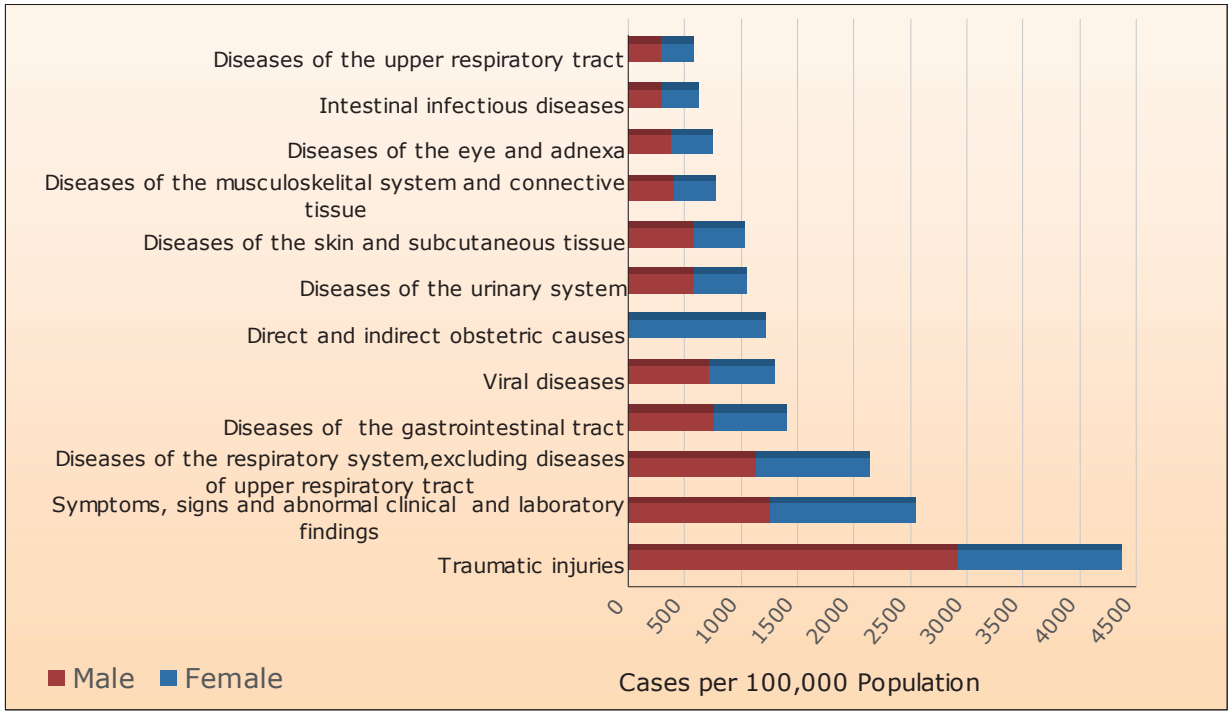
Symptos, signs and abnormal clinical and laboratory findings which was the third leading cause from 2003 to 2008, ranked as the second since 2009, as well as in 2014. Diseases of the respiratory system has become the third leading cause since 2009 and it was second up to 2008. Hospitalization due to diseases of the gastro-intestinal tract has become the fourth leading cause for the current year 2014 and it was ranked as the fifth leading cause since 2006.

During 2014, hospitalization due to viral diseases is the fifth leading cause of hospitalization for the country. But still it was the fourth leading cause for several districts like Colombo, Gampaha, Monaragale and Kegalle according to statistics given in the Detailed Table 22.

Diseases of the urinary system are being important cause of hospitalization and it is ranked as seventh in 2014. But it is ranked as fourth leading cause for Mullaitivu and Trincomalee districts. Hospitalizations due to diseases of eye and adnexa is remaining as the tenth leading cause since 2012. However it is ranked as the fourth leading cause for the Matale district.

Graphical representation of the leading causes of hospitalization is given in Figure 3.3.

Fig 3.3 : Leading Causes of Hospitalization, 2014



3.2.1.2 Outpatient Morbidity

Data on outpatient attendance by diseases are not collected routinely from government hospitals. Out-patient morbidity data obtained from surveys carried out in the past have indicated that there are no any significant differences from the pattern of inpatient morbidity data.

3.2.2 Hospital Mortality

Detailed Table 16 indicates that mortality due to pregnancy, child birth and the puerperium, cetain conditions originating in the perinatal period and injury, poisoning & certain other consequences of external causes have been decreased in 2014. But among all the disease groups, death by injury, poisoning and certain other consequences of external causes is the only group that has shown a clear reduction within the past 5 years.

It is estimated that only 30-40 percent of registered deaths occur in government hospitals.

3.2.2.1 Leading Causes of Hospital Deaths

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.

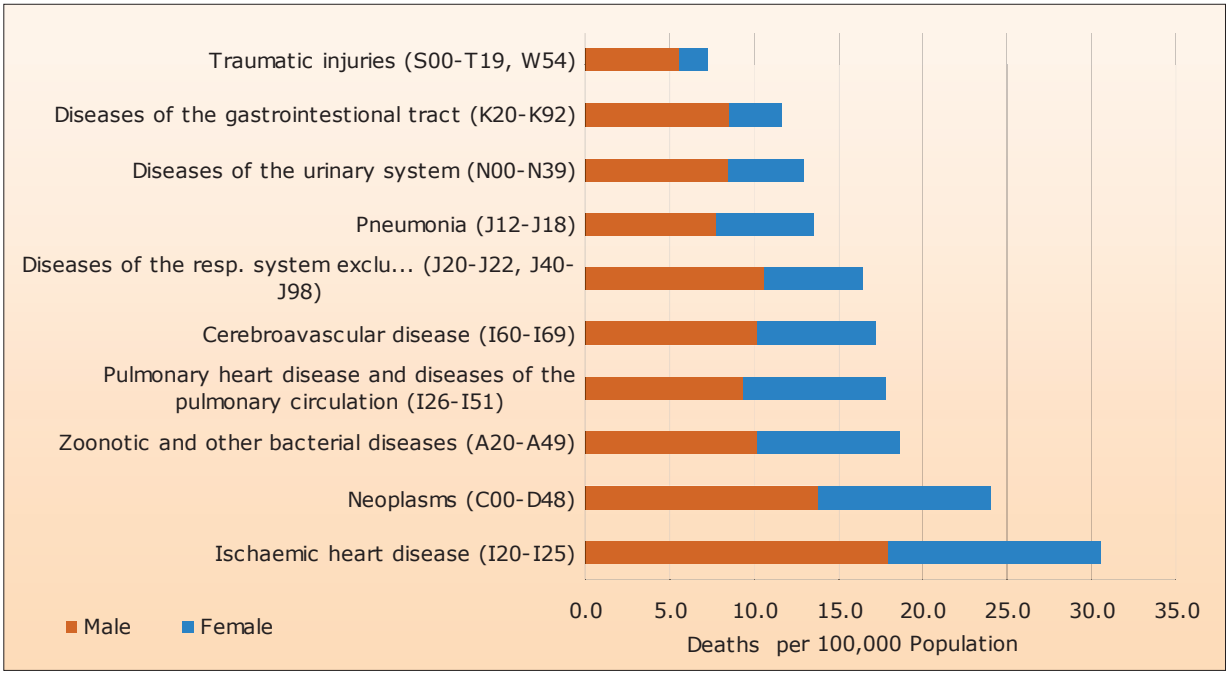
According to Detailed Table 19, ischaemic heart diseases, neoplasms, zoonotic and other bacterial diseases, pulmonary heart disease and diseases of the pulmonary circulation and cerebrovascular diseases are ranked as the first five leading causes of hospital deaths. These diseases accounted for about 53 percent of analyzed hospital deaths. Diseases of the ischaemic heart ranked as the major leading cause of deaths since 1995.

Deaths per 100,000 population for the top ten causes have been shown in the Figure 3.4. There is a considerable gender difference in the number of deaths per 100,000 population according to the above said figure. Male deaths are relatively higher than corresponding female deaths for major leading causes of deaths.

Neoplasms ranked as the second leading cause of death since 2009.

Higher death rates associated with neoplasms in Colombo, Kandy, Galle, Jaffna , Badulla and Anuradhapura districts is a result of cancer patients being transferred to the Teaching Hospitals in Maharagama (Colombo district), Kandy, Karapitiya, Jaffna, Anuradhapura and Provincial General Hospital in Badulla where advance facilities for the treatments of neoplasms are available. In addition, the morbidity rate has also increased during the last five years.

Fig 3.4 : Leading Causes of Hospital Deaths, 2014

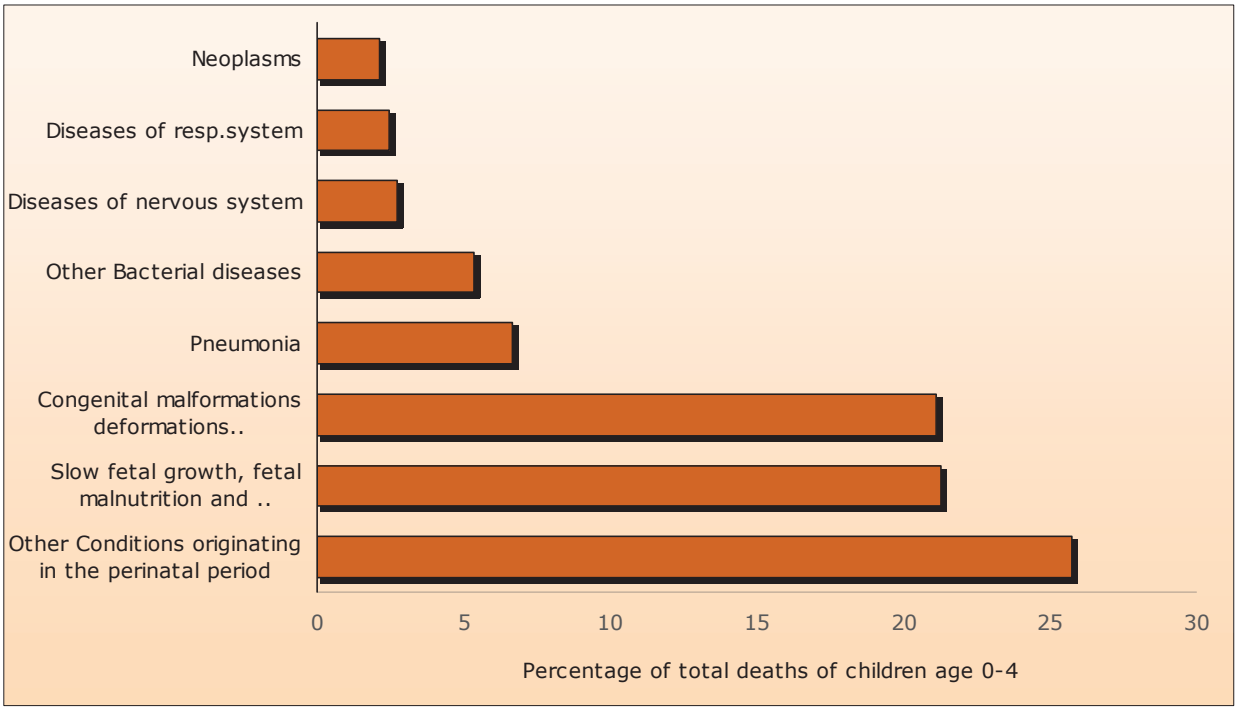


Zoonotic and other bacterial diseases has become the third leading cause of death in 2014 though it was ranked as the sixth leading cause in 2013. Cerebrovascular diseases which was the third leading cause in 2013 ranked as fifth in the year 2014.

Leading causes of death for children in the age group of 0 to 4 years are represented in the Figure 3.5.

The major leading cause of death for children in the above age catergory is other conditions originating in the perinatal period (P08-P96). However according to the Figure 3.5, slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05-P07) and congenital malformations,deformations and chromosomal abnormalities (Q00-Q99) are second and third causes of death respectively.

Fig 3.5 : Leading Causes of Hospital Deaths for Children Aged between 0-4 years, 2014



3.2.2.2 Case Fatality Rate

According to 2014 hospital statistics, septicaemia case fatality rate has been reported as the highest rate which is 39.6 and it was 37.7 in 2013. (Detailed Table 26). Case fatality rate of pneumonia is continuously increasing from 2009. In 2014 it is the second highest case fatality rate (12.1) among the selected diseases. However case fatality rate of liver diseases has also increased from 10.6 to 10.9 in 2014.

3.3 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 can be seen, which are predominantly medically confirmed or at least medically examined.

4. Patient Care Services

4.1 Hospital Services

4.1.1 Inpatient and Outpatient Services

In Sri Lanka patient care services are provided to patients under two categories namely inpatient care and outpatient care.

During the year 2014 the government curative care institutions have provided services, to around 6 million inpatients, 55 million outpatients and about 24 million patients attending various clinics. In 2014, 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 happened.

Between 2000 to 2014 inpatient admissions showed an increasing trend over the period and it was over 5 million from 2009. It is over to 6 million in 2014. Outpatient visits increased by 2.3 percent in the year 2014 when comparing with 2013 (Table 4.1). Inpatient admissions per 1,000 population is greater than 350 in Colombo, Kandy, Polonnaruwa, Kilinochchi and Mullaitivu districts in 2014 according to Detailed Table 27.

There are fifteen districts which recorded higher rates than the national figure of 295 inpatients per 1,000 population for the year 2014.

Highest outpatient attendance per 1,000 population is observed in Mannar district in 2014 which was 4329.3 followed by the Mullaitivu district which was 4224.8.

Table 4.1 : Trends in Inpatient and Outpatient Attendance and Rates per 1,000 Population, 1995 - 2014

Year	Inpatients Treated		Outpatient Attendance[1]	
	Number '000	Rate[5]	Number '000	Rate[5]
1995 [2]	2,953	179.3	32,084	1,947.7
1996 [3]	3,339	184.5	35,348	1,953.2
1997 [4]	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 [3]	5,474	267.7	48,782	2,385.4
2010	5,591	270.7	49,871	2,414.7
2011*	5,568	266.8	50,682	2,428.6
2012	5,840	287.3	50,631	2,490.7
2013	5,926	289.3	53,859	2,629.4
2014	6,120	294.6	55,105	2,653.0

*Provisional *Source : Medical Statistics Unit*

Excludes:

[1] Clinic Attendance

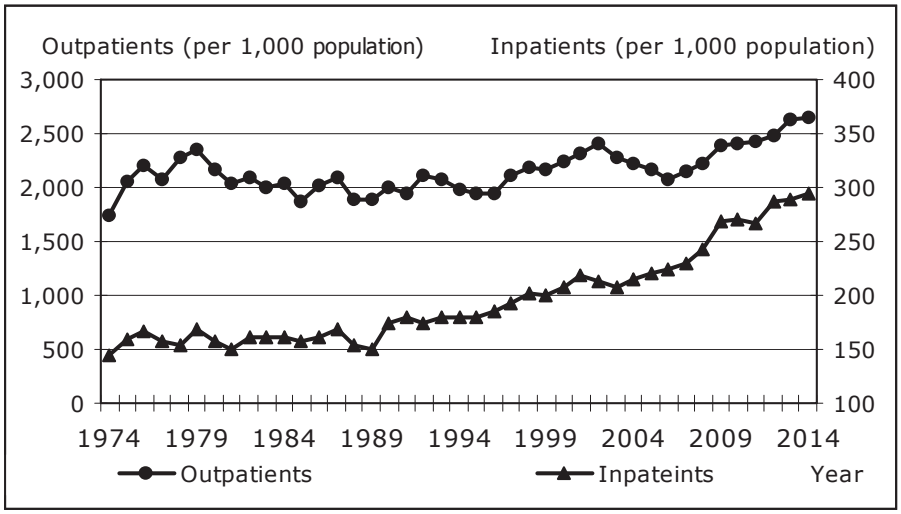
[2] Jaffna, Kilinochchi, Mullaitivu and Ampara Districts

[3] Kilinochchi and Mullaitivu Districts

[4] Ampara District

[5] Rate per 1,000 population

Fig 4.1 : Inpatient and Outpatient Attendance in Government Medical Institutions, 1974 - 2014



Excludes : *Source : Medical Statistics Unit*

1 : Northern & Eastern Provinces in 1990

2 : Jaffna, Kilinochchi, Mullaitivu & Ampara districts in 1995

3 : Kilinochchi and Mullaitivu Districts in 1996 and 2009

4 : Ampara District in 1997

Killinochchi district shows the third highest outpatient attendance per 1,000 population in 2014 which was 3,747.7 (Detailed Table 30). Gampaha district shows the least outpatient attendance per 1,000 population.

There were fifteen districts which recorded higher rates than the national figure of 2,653 outpatient attendance per 1,000 population. The highest outpatient 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 2014 (Detailed Table 32).

Information on clinic visits in 2014 shows an increasing trend compared to previous years and visits are higher in Teaching Hospitals (Detailed Table 34).

According to the Detailed Table 36, highest clinc visits are recorded from medical clinics which is 43.2 percent of total clinic visits. Dental and Gynaecology & Obstetrics clinics recorded the second and third highest clinic visits respectively. However, Gynecology & Obstetrics clinic visits ranked as fifth in Colombo district according to Detailed Table 35.

4.1.2 Maternal Services

Table 4.2 illustrates the maternal services provided by different types of institutions. When compared with 2013, total number of deliveries are declined in government institutions in 2014. (Total number of deliveries in 2013 is 346,065)

Number of deliveries occured in Teaching Hospitals is the highest as usual.

The Teaching Hospitals including the four maternity hospitals accounted nearly 29 percent of the deliveries.

Number of deliveries occured in Provincial General Hospitals, District General Hospitals, Base Hospitals Type B and Primary Medical Care Units and Maternity Homes are increased when compared with 2013. When the deliveries in Base Hospitals Type A are considered, number of deliveries occured in these hospitals are higher than the other types of hospitals except Teaching and District General Hospitals (Table 4.2).

The highest caesarean section rate was recorded from the District General Hospitals followed by Base Hospitals Type A . Teaching Hospitals also had a higher rate in the year 2014 (Table 4.2).

As in previous years, Sri Jayawardenapura Teaching Hospital recorded a comparatively higher caesarean section rate of 52.6 per 100 deliveries.

Overall caesarean section rate has increased when compared to the year 2013 and same pattern can be seen in all types of institutions except Teaching Hospitals and Provincial General Hospitals.

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

Table 4.2 : Maternal Services by Type of Institution, 2014

Type	Outcome of Delivery			Total Deliveries		Method of Delivery			% of Caesarian Sections
	Single Deliveries	Twin Deliveries	Other Deliveries	Number	%	Normal	Forceps	Caesarean	
Teaching Hospitals	93,787	1,090	31	94,908	28.8	59,958	1,718	33,232	35.0
Provincial General Hospitals	28,671	316	7	28,994	8.8	21,203	128	7,663	26.4
District General Hospitals	86,199	807	12	87,018	26.4	55,146	590	31,282	35.9
Base Hospitals Type A	65,882	560	2	66,444	20.2	42,458	240	23,746	35.7
Base Hospitals Type B	39,051	223	1	39,275	11.9	28,725	427	10,123	25.8
Divisional Hospitals Type A	2,620	4	-	2,624	0.8	2,615	2	7	0.3
Divisional Hospitals Type B	6,848	11	-	6,859	2.1	6,858	-	1	0.0
Divisional Hospitals Type C	3,163	18	-	3,181	1.0	3,177	-	4	0.1
Primary Medical Care Units and Maternity Homes	429	-	-	429	0.1	429	-	-	-
Total	326,650	3,029	53	329,732	100.0	220,569	3,105	106,058	32.2

Source : Medical Statistics Unit

During 2014, a total of 330,898 live births and 1,971 still births took place in government hospitals (Detailed Table 40).

The number of births occurring in government hospitals as well as registered live births has been decreased from 2013 to 2014. As recorded in Detailed Table 39, 94.6 percent of the live births occured in the government hospitals in 2014. Figure 4.2 shows the trends in registered live births in the Registrar General's Department vs live births occured in government hosptals.

The still birth rate per 1,000 births in government hospitals is 5.9 for the year 2014 and it is lower than the rate of 6.4 per 1,000 births in 2013 (Detailed Table 40).

A slight decrease in low birth weight rate is observed in government hospitals in 2014 (16.0) when compared to 2013 figure of 16.7 (Detailed Table 40).

Fig 4.3 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 to Fig 4.3, percentage of live births occurring in government hospitals has an increasing trend from the past. In 2002, a clear decline in the distribution can be observed.

From 2003, the percentage began to increase until 2006 and a slight decrease has been observed in 2007. After that it is impossible to notice a significant variation in the distribution.

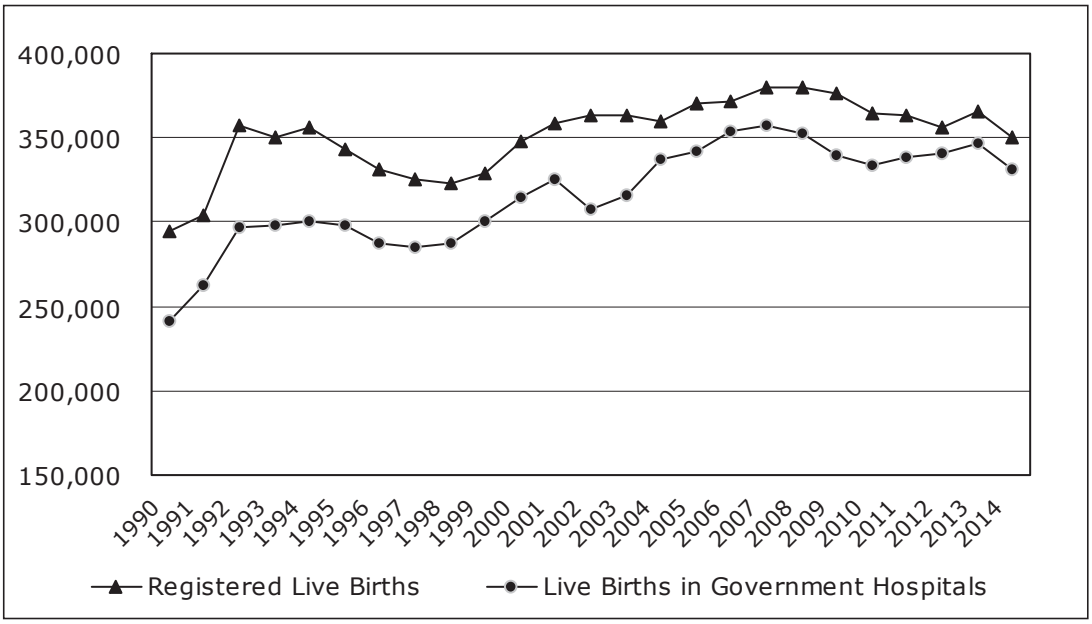
The percentage of deaths occurring in the government hospitals does not show an apparent increase or decrease in trend. It is ranging between 30 and 40 percent of registered deaths, through out the period from 1979 to 2014.

In 2009, percentage of deaths occurring in government hospitals is around 36 percent. But from 2010, it has decreased to 34 percent and in 2011 the percentage of deaths occurring in government hospitals tends to increase again.

At a glance of the graph (Fig 4.3), fluctuations could be observed in the trend line of deaths, but these fluctuations are not highly significant.

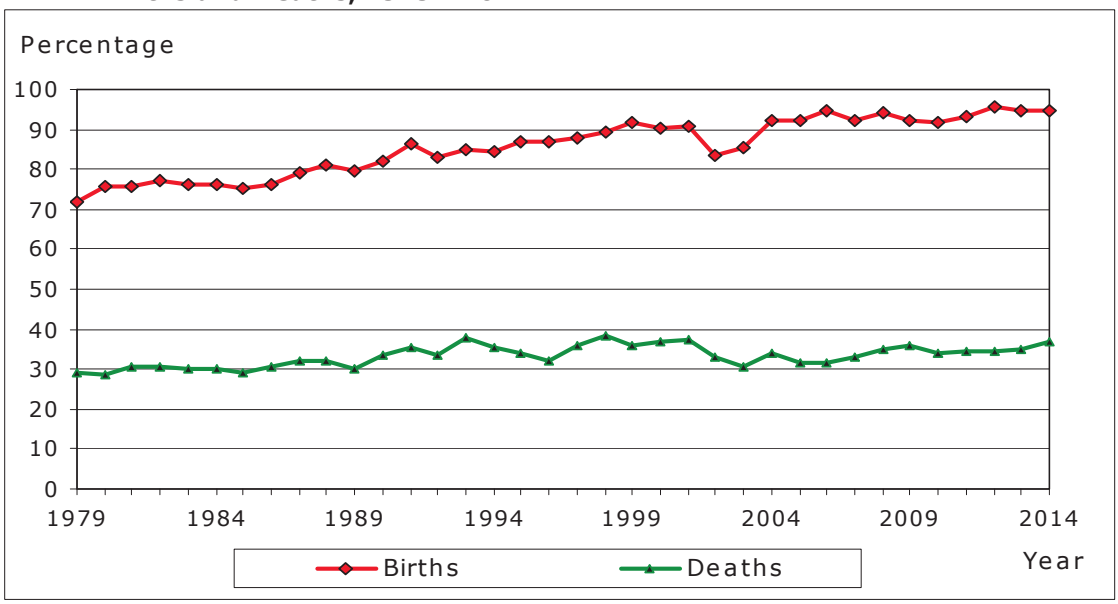
Figure 4.4 shows the distribution of live births by place of occurance in Sri Lanka. Highest number of live births are occured in Colombo district and it is above 40,000. Live births in Kandy, Gampaha and Kurunegala are within the range of 20,000 to 30,000. Pie charts in Fig 4.4 are used to represent the low births and normal births. There is no big variation in the percentages of low births in each district. However, there are more low births in Nuwara Elliya and Badulla districts than other districts.

Fig 4.2 : Registered Births Vs Hospital Births, 1990 - 2014



Source : Registrar General's Department and Medical Statistics Unit

Fig 4.3 : Live Births and Deaths in Government Hospitals as a Percentage of Registered Births and Deaths, 1979 - 2014

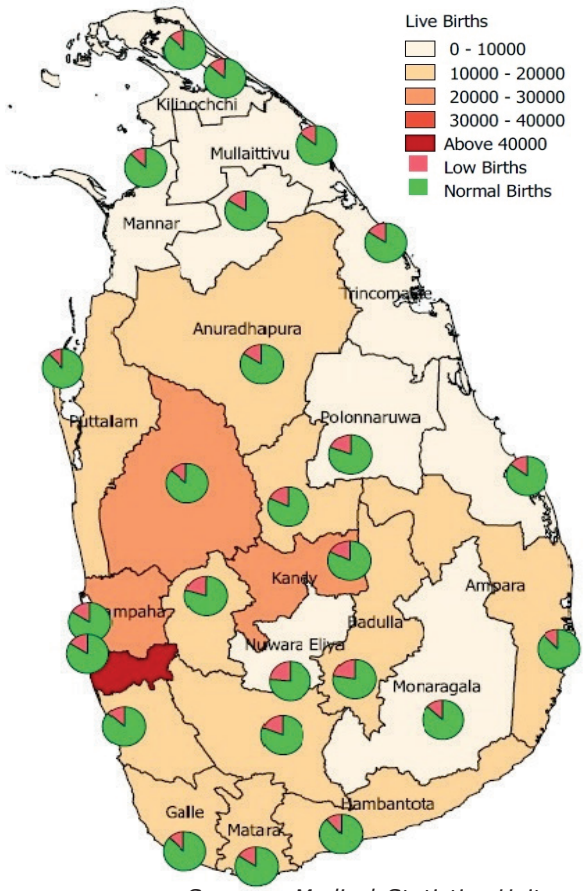


Source : Medical Statistics Unit

Excludes:

1 : Northern & Eastern Provinces in 1990 and 1991
2 : Jaffna, Kilinochchi, Mullaitivu & Ampara Districts in 1995
3 : Kilinochchi and Mullaitivu Districts in 1996 and 2009
4 : Ampara District in 1997

Fig 4.4 : Distribution of Live Births by Place of Occurance in Sri Lanka, 2014



Source : Medical Statistics Unit

4.1.3 Utilization of Medical Institutions

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 over crowding in the bigger institutions.

Medical Statistics Unit calculates several indicators in order to find utilization of medical institutions.

Those are,

Average Duration of Stay - Average number of days that inpatients (exclusive of newborn) remained in the hospital.

Bed Occupancy Rate - The percentage of inpatient beds occupied over a given period.

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

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 37). Average duration of stay is significantly longer in the specialized hospitals such as Mental, Chest, Cancer, Leprosy and Rehabilitation.

In 2014, bed occupancy rates are higher in all the Provincial General Hospitals. Teaching Hospitals also show a higher value in bed occupancy in 2014 and among the RDHS Divisions which have Teaching Hospitals Kandy RDHS Division indicates the highest bed occupancy rate. District General Hospitals indicates a fairly high bed occupancy rates too and among them District General Hospital in Ratnapura district shows more than 100 percent bed occupancy rate (Detailed Table 37).

As shown in Detailed Table 37, in 2014, Teaching Hospitals, Provincial General Hospitals and Other Hospitals have higher bed occupancy rates which are more than 70, while District General Hospitals and Base Hospitals have bed occupancy rates between 60 to 70 and Divisional Hospitals have comparatively low figures which are less than 40.

Specialized hospitals that are in "Other Hospitals" category show the most significant value in bed occupancy as usual when compared to the other categories of hospitals.

Base Hospitals Type A in Nuwara Eliya, Matale and Hambantota districts have more than 90 percent bed occupancy rates in 2014. The highest bed occupancy rate of 83.45 is recorded from the Batticaloa district among all Type B Base Hospitals.

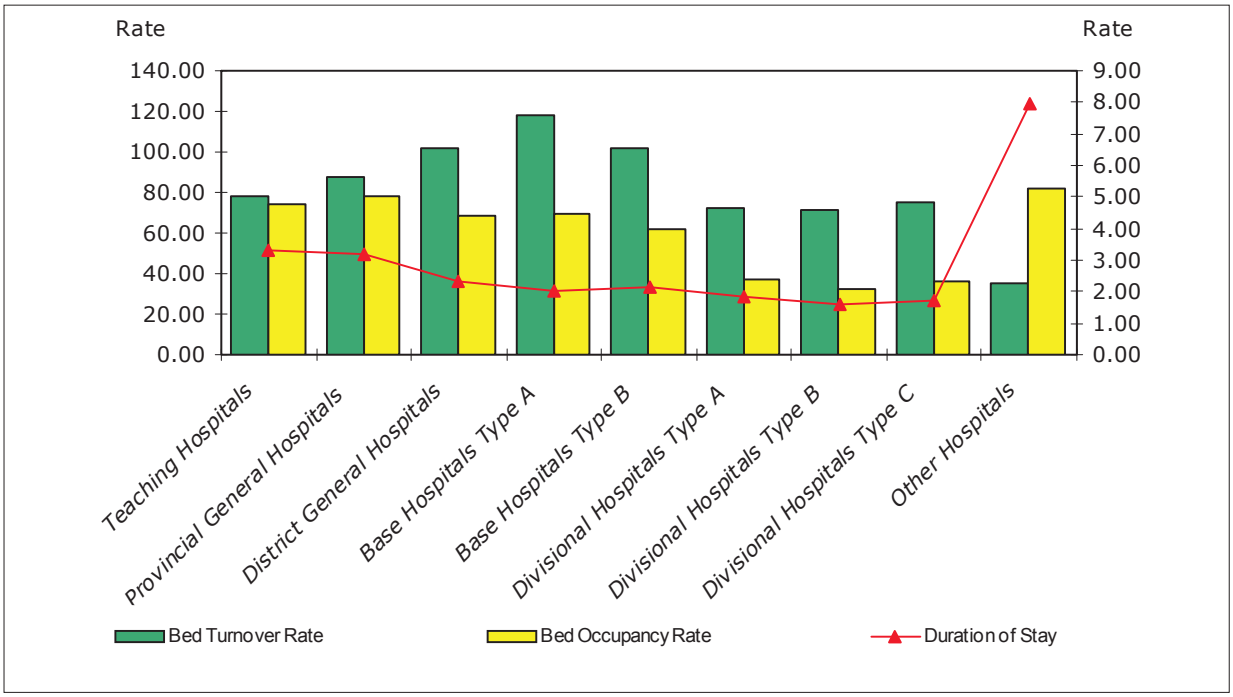
All Divisional Hospitals Type A, B or C do not indicate higher bed occupancy rates in 2014. Among the hospitals in other category, Kegalle district shows the highest bed occupancy rate (Detailed Table 37).

As previous years, in 2014 specialized hospitals are the most over crowded institutions in Sri Lanka.

According to the Detailed Table 37, it is also noteworthy that utilization of hospitals varies from district to district, irrespective of the type of hospital.

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

Fig 4.5 : Utilization of Medical Institutions, 2014



Source : Medical Statistics Unit

4.2 Oral Health Services

4.2.1 Vision

Having healthy smiling Sri Lankan nation with 20 functioning teeth even at 80 years.

4.2.2 Goal

Twenty functional teeth at eighty years among Sri Lankans.

4.2.3 History of the Oral Health Services

In 1925 the first dental clinic was established in Ward Place, Colombo. This was the beginning of the government oral health services and the beginning of the employing of government dental surgeons.

Dental surgeons were initially graduated by Faculty of Medicine, Colombo and after that Faculty of Dental Sciences was started in Peradeniya in 1947.

Public oral health service was commenced in 1951 with the commencing of the training of school dental nurses.

4.2.4 Oral Health Services

Oral Health services are provided by the government sector as well as by the private sector. However the government sector is the predominant player in the provision of care both in urban and rural areas with 60-65% of the service provision. Moreover the majority of dental surgeons in government sector are involved in part time private sector practice. Nearly 2% of the service is provided by universities, security forces and non-governmental organizations. The service provided by the security forces are almost entirely for their personnel.

The oral health services in the public sector provided by the government consists of two components:

1. Curative care services - mainly provided through clinics located in government hospitals such as peripheral units, district hospitals and base hospitals
2. Preventive care services - mainly provided through
   - School Dental Clinics
   - Adolescent Dental Clinics
   - Community Dental Clinics

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

The School Dental Clinics are located in the school premises providing oral health care to children between 3-13 years. During the year 2014, there were 433 School Dental Clinics serviced by 420 SDTs. The 62 ADCs were manned by Dental Surgeons catering to children above 13 years of age and the complicated cases are referred by SDTs. Community Dental Clinics are located in highly populated metropolitan areas and the dental surgeons working in these clinics concentering on providing preventive care for all age groups in the population.

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

74 New dental surgeons and 28 school dental therapists were recruited during the year 2014 and in year 2014 there were 1,574 dental surgeons worked in the public sector.

4.2.5 Specialist Services

There are five main specialties in the oral health care service: Oral and Maxilo-Facial Surgery (OMF), Orthodontics, Community Dentistry, Restorative Dentistry and Oral Pathology. In the year 2014, there were 61 dental specialists belonging to these specialties serving under the Ministry of Health. They were attached to Teaching, General and some Base Hospitals.

The Dental Institute-Colombo, Institute of Oral Health-Maharagama and the Dental Hospital (Teaching)-Peradeniya are the premier institutions for providing multidisciplinary oral health care in Sri Lanka. Both out-patient and in-patient treatments are provided by these institutions except at the Dental Institute, Maharagama.

Table 4.3 : Distribution of Dental Specialists by Specialty

Specialty	Number
Oral & Maxillo-Facial Surgery	29
Orthodontics	16
Community Dentistry	8
Restorative Dentistry	7
Oral Pathology	1
Total	61

4.2.6 Mobile Dental Services

In addition to different types of dental clinics located in hospitals, mobile oral health programmes cover the entire island. The mobile Dental Unit at the Dental Institute, Colombo deploys to any destination of the country on request. During the year 2014 the unit has conducted more than 160 mobile dental clinics and provided dental care for more than 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 have their own mobile units catering to target groups such as school children, adolescents, ante-natal mothers and 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.

4.2.7 Oral Disease Trends

Ministry of Health in collaboration with the World Health Organization has conducted three National Oral Health Surveys in 1983/84, 1994/95 and 2002/2003. The 4th National Oral Health Survey 2015/16 is currently in progress.

These surveys indicate overall declining trend in prevalence and severity of dental caries yet marking a substantial problems among all age groups.

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

Age group	Prevalence & severity	1983/84	1994/95	2002/2003
6 yrs	Prevalence	78.0%	76.4%	65.5% (5-yrs)
	DMFT	4.4	4.1	3.6 (5-yrs)
12 yrs	Prevalence	67.0%	53.1%	40.0%
	DMFT	1.9	1.4	0.9
35-44 yrs	Prevalence	92.0%	91.1%	91.5%
	DMFT	9.2	10.1	8.4

Table 4.5 : Prevalence of Healthy Gums in 12 and 35-44 Year Olds

Age group	1983/84	1994/95	2002/2003
12 years	12.0%	13.3%	27.2%
35-44 years	6.5%	2.1%	10.1%

4.2.8 Perceived Awareness about Presence of Oral Diseases

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.

4.2.9 Oral Health Related Behaviors

Use of fluoridated tooth paste and toothbrushes 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 brushes and fluoridated tooth paste. This percentage was 71.52% among adults but only 30.82% among elderly. Moreover, a highest prevalence of betel chewing was reported (49.15%) among elderly.

4.2.10 Teeth Present, Teeth 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 was 24.96 and it was 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 Aged 5 Years and 12 Years with Caries, Active Caries and Treat Caries

Age (years)	No	% with Caries	% Active Caries	% Treated Caries
05 decidous	1995	65.31	63.51	1.80
05 permanent	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 in the above table. It shows that only 1.8%, 0.26% and 4.85% 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 led towards more in prevention of common oral diseases.

4.2.11 Public Oral Health Care Programmes

There are four main ongoing public oral health care programmes running successfully such as Pregnant Mothers Programmes, Early Childhood Caries Prevention and Control Programme, Save the Molar Programme and Oral Cancer Prevention Programme.

Ministry of Health has already started the Save Molar Programme in year 2013 to strengthen the primary oral health care in Sri Lanka. Under this programme, grade one school children are screened to identify the high risk children for dental caries especially in molar teeth. Molar teeth of high risk children are sealed by fissure sealant material to protect those teeth from dental caries in future. Save Molar Programme was successfully carried out in 2013 and 2014 covering 50 selected MOHH in Sri Lanka. This programme is implemented targeting school children as it will be aimed to have caries free adolescents once they leave the school to achieve the goal of 20 functional teeth at 80 year old age.

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

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 in this 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 programs
- Build capacities 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 Health, 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 and 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.

- Technical advisory committee on Maternal Care and Family Planning – chaired by DDG/PHS 11
- Technical advisory committee on Newborn and Child Health – chaired by DDG/PHS 11
- Working group on School Health – chaired by DGHS
- Technical Advisory Committee on Health of 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 Breastfeeding & Marketing of Designated Products – chaired by Secretary to the Ministry of 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 Nutrition School health issues are being forwarded to the Steering Committee on Health Promotion schools chaired by Additional Secretary/Ministry of Education.

5.1.1.2 Reporting of the Performances of Family Health Programme

'Units of service recipient' of the Family Health Program are eligible families and the schools in a given heath area. An eligible family is defined as a family with a married woman between 15 to 49 years of age either legally/customary married or living together or a family with a child under 5 years of age.

A pregnant or a cohabiting woman irrespective of marital status and age or single woman between 15-49 years of age; widowed, divorced or separated are also considered under an eligible family.

Services provided to the target population by the Public Health Staff at divisional (MOH) levels are being captured through 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.

A summary of 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 and the official website of the FHB (www.fhb.health.gov.lk).

5.1.1.3 Prepregnancy 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 fulfill this, is by ensuring women of child bearing 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 so as 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 behavioral changes.
- Assure 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.

The package of pre-conception care has been implemented in all districts of the country by end of 2014.

5.1.1.4 Maternal and Newborn Care

Maternal care has been one of the main focuses of the programme from its inception. Hence the public health staff of Sri Lanka is well-geared in providing services for pregnant and postpartum mothers.

5.1.1.4.1 Maternal Care

Maternal care is being provided through a maternal care package which includes evidence based interventions to improve maternal health. The package was revised to improve the quality of service delivery and was scaled up implementation during the year 2012.

The care for pregnant mothers begins with the registration of pregnant mothers with the 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 risk 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 PHM for care (94%) indicates that the majority of pregnant women are in contact with the services offered by the FHP. Of them over 90% 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 stagnating around 6%. 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).

Table 5.1.1 : Pregnant Mothers Registration and Care Received through Family Health Programme (FHP), 2008 - 2014

Indicator		2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Pregnant mothers registered by PHMs out of estimated pregnancies		89.8	90.0	85.9	94.3	94.0	90.0	91.2
Pregnant mothers registered	before 8 weeks	61.4	66.0	69.8	72.6	75.2	75.4	76.2
	between 8-12 weeks	28.5	25.0	22.6	20.3	18.3	17.7	17.4
Teenage pregnant mothers out of all registered pregnancies		6.7	6.5	6.5	6.1	6.0	5.3	4.9
Pregnant mothers protected with Rubella at registration		93.3	94.8	95.4	95.9	96.8	97.0	98.2
Pregnant mothers tested for VDRL at the time of delivery		93.9	97.8	96.0	97.0	99.3	99.7	98.1
Pregnant mothers blood group tested at the time of delivery		99.5	99.9	99.8	99.6	100.0	99.9	97.8
Pregnant mothers protected for Tetanus out of reported deliveries		99.8	100.0	99.9	99.6	99.9	99.9	97.8
Mothers with low BMI at clinic visit before 12 weeks		26.3	25.4	25.4	24.6	23.8	23.0	24.3

Source : MCH Quarterly Return - H 509 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. Over 90% of registered pregnant mothers had at least once been visited at home by PHMs and average number of home visits per mother by PHMs was 5 (Table 5.1.2).

Approximately 79% 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.

Table 5.1.2 : Health Contact with Public Health Staff, 2008 - 2014

Indicator	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Registered pregnant mothers visited at least once at home by PHM	96.1	94.4	92.9	91.7	90.2	91.3	90.2
Registered pregnant mothers paying at least one field clinic visit	96.1	95.6	94.7	95.9	95.2	94.8	95.5

Source : MCH Quarterly Return - H 509 Family Health Bureau

5.1.1.4.2 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 mother and the newborn during postpartum period. Postpartum 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.

Pregnancy outcome was reported for 93.7% 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).

5.1.1.4.3 Maternal Mortality

Maternal Mortality Ratio (MMR) is an overall quality index of a country's socio-economic development and healthcare. Sri Lanka reported a MMR of 1,694 per 100,000 live births in the year 1947 and gradually reduced the same over the last few decades to reach levels on par with developed countries. A multitude of interventions, both health and non-health, have contributed to this achievement. Factors such as socio-economic development, free education and related high literacy rate of population, free health services, quality of obstetric care, better transport, control of communicable diseases, well organized primary health care systems, etc. have been attributed to this success.

Table 5.1.3 : Pregnancy Outcome and Postpartum Care for Mothers Registered during 2008 - 2014

Indicator	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Pregnancy outcome reported out of registered pregnancies	89.1	89.3	88.0	88.7	88.8	91.5	93.7
Institutional deliveries out of total reported deliveries	99.6	99.7	99.8	99.9	99.9	99.9	99.7
Caesarean sections out of total institutional deliveries reported	25.8	27.0	27.7	28.7	30.5	31.1	32.1
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	80.6	79.3
% LSCS out of total reported deliveries	25.8	27.0	27.7	28.7	30.5	31.1	32.1
Average number of home visits during first 10 postpartum days	1.8	1.8	1.8	1.8	1.7	1.7	1.7

Source: MCH Quarterly Return - H 509 Family Health Bureau

Maternal Death Surveillance and Response (MDSR) is coordinated at national level by Family Health Bureau (FHB) with the objective of computing national and sub-national maternal mortality indices and also to translate lessons learnt out of each maternal death into policy, programs and practices. FHB coordinates the audit process all over the country with the expertise contribution from professional colleges of obstetricians, anaesthesiologists, community physicians, administrators and forensic pathologists. Field and hospital health staff are required to notify, conduct post-mortems, investigate and report to the national level of each and every maternal death as a routine work.

All deaths (irrespective of the cause) of women in reproductive age (15 – 49 years) during the pregnancy period and until one year after termination of pregnancy from all throughout the country are notified to Family Health Bureau within 24 hours of occurrence. Field and hospital administrators, with the participation of all the care givers involved in the management of the index case, conduct a death audit in the form of a verbal autopsy in field settings and facility-based death review at hospitals to analyse service deficiencies based on 3 delays. Findings are reported to FHB in two weeks. FHB collects, compile and prepare case scenarios at national level based on data received from field, hospital and supported by mandatory post-mortem findings.

A "no-name no-blame" strategy is adopted in reviewing deaths in confidential manner. Health staff themselves suggest strategies for change and translate lessons learnt out of the death into actions. The actions implemented are reported to the national level within 14 days. The review process is repeated at district level with wider participation of stakeholders, especially decision-makers each year.

From the year 2010, Maternal and Child Morbidity Mortality Surveillance Unit of FHB initiated a tracking system to ensure timely receipt and completeness of death reports. National level case scenario development and issues analysis was introduced with the participation of obstetricians and other relevant specialties. Format of audit process revised to save time and safeguard non-threatening environment to participants. Timely conducting of field, hospital, district & national maternal death audits was ensured. Structure of the maternal death audit minutes changed to be more readable and action highlighted. A follow up was done regularly on the progress of the implementation of the suggested actions at technical advisory committees of Ministry of Health.

National Maternal Death Reviews at district level are conducted each year by Family Health Bureau in collaboration with the Sri Lanka College of Obstetricians and Gynaecologists (SLCOG) 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.

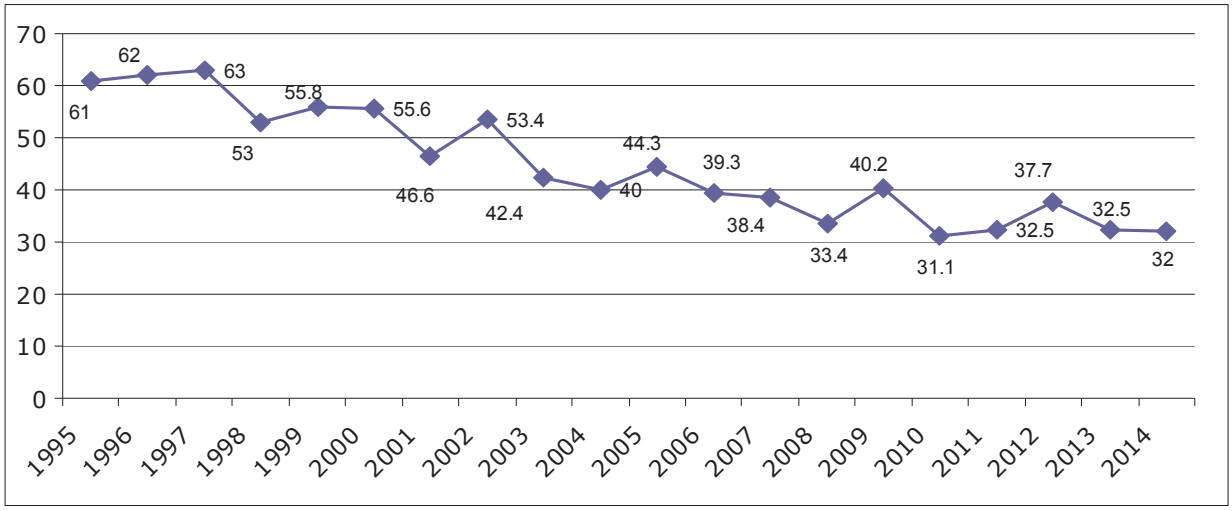
In the year 2014, timely notification of maternal deaths improved to 90%. Coverage of conducting post-mortems was 95%. Receipt of death audit reports achieved 100% prior to conducting national maternal death reviews. Audit of all 202 probable maternal deaths reported during the year 2014 was done in time and 112 maternal deaths were identified as maternal deaths to calculate district and national maternal mortality ratios. Deficiencies of service provision were identified and feasible solutions were worked out for each death. Conducting national maternal death reviews in all 28 health regions was 100%. Minutes of death reviews were disseminated to all relevant stakeholders.

National maternal mortality ratio for the year 2014 is 32.03 per 100,000 live births (Live births reported by Registrar General's Department is 349,715).

Sri Lanka has achieved one of the lowest maternal mortality rates in the developing world at a very low cost. Figure 5.1.1 shows the Maternal Mortality Ratio in Sri Lanka from 1995 to 2014.

Out of the confirmed 112 deaths, 56 cases (50%) were direct maternal deaths and indirect causes accounted for 55 (49%) deaths. one case was categorized as unascertained.

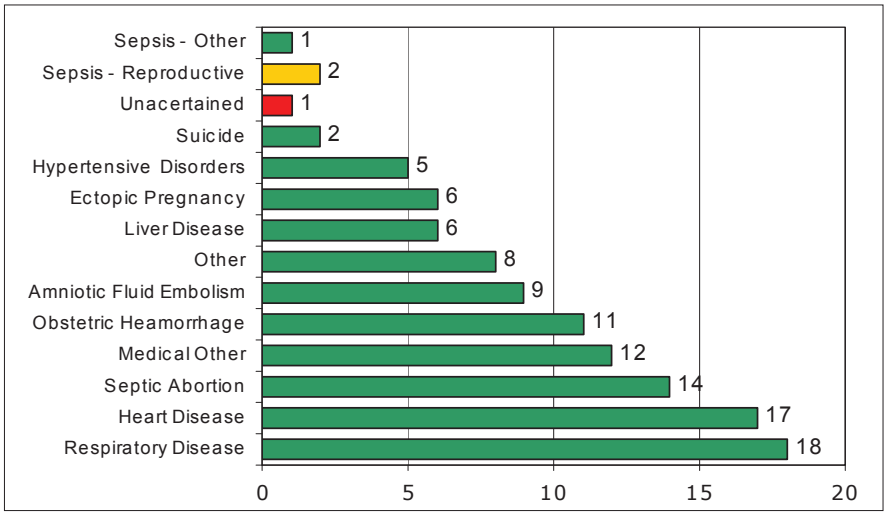
Fig 5.1.1 : Maternal Mortality Ratio in Sri Lanka, 1995 - 2014



Source : Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

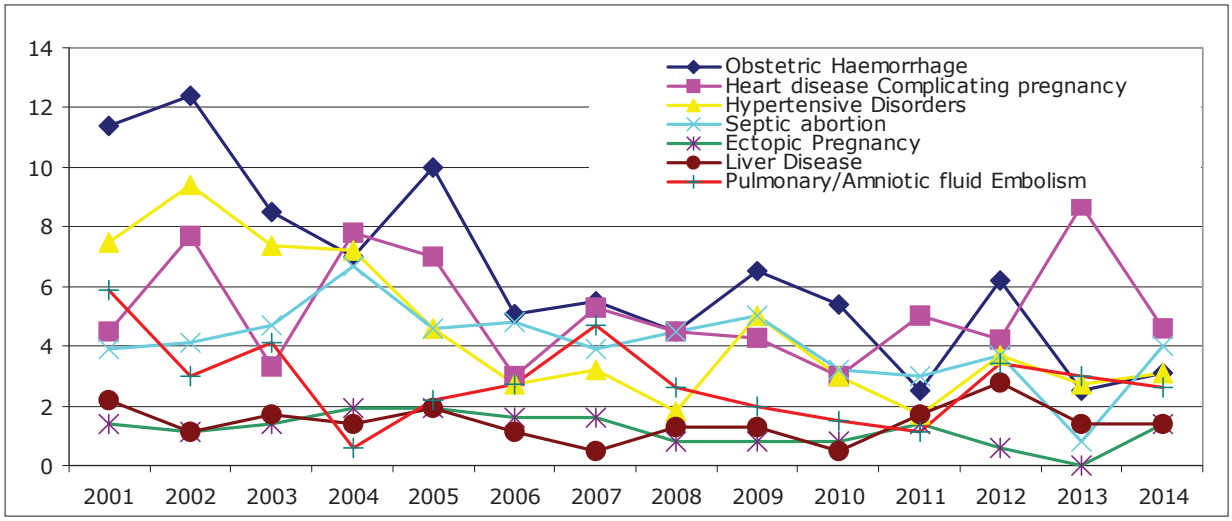
The leading causes of maternal deaths were respiratory diseases (n = 18) and heart diseases complicating pregnancy (n = 17), septic abortions (n = 14) and other medical diseases (n = 12) (Figure 5.1.2). It is notable, the changing causality profile from direct obstetric to indirect medical causes. Cause-specific mortality ratios for almost all direct causes came down (Fig 5.1.3)

Fig 5.1.2 : Leading Causes of Maternal Deaths, 2014



Source : Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

Fig 5.1.3 : Cause Specific Maternal Mortality Rates, 2001 - 2014

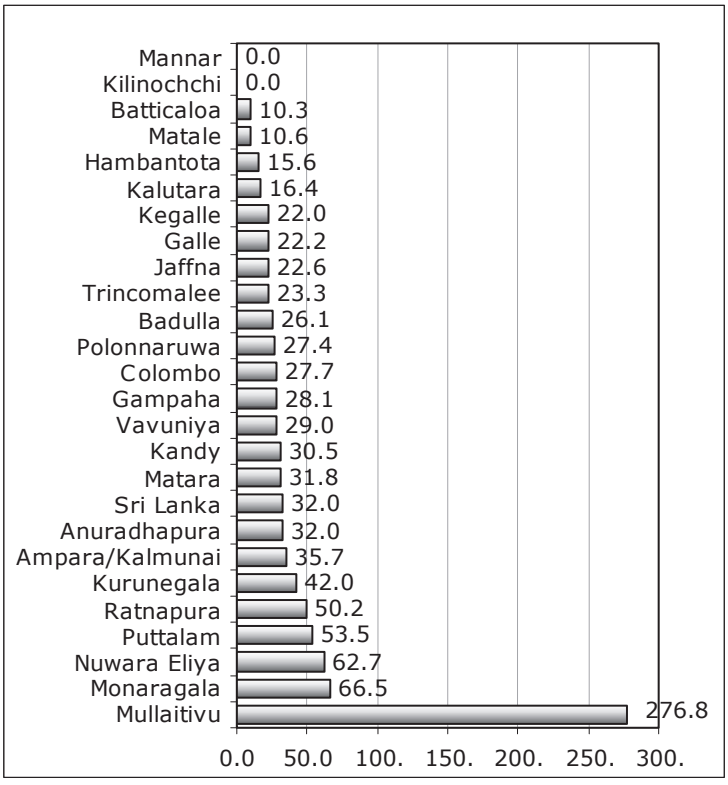


Source : Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

Table 5.1.4 : Live Births, Maternal Deaths and Maternal Mortality Ratio by Health Region

Health Region	Live Births	MDs	MMR
Sri Lanka	349,715	112	32.0
Polonnaruwa	7,300	2	27.4
Nuwara Eliya	12,753	8	62.7
Kegalle	13,628	3	22.0
Mannar	1,574	0	0.0
Puttalam	14,947	8	53.5
Anuradhapura	15,644	5	32.0
Batticaloa	9,668	1	10.3
Badulla	15,300	4	26.1
Hambantota	12,851	2	15.6
Ampara/Kalmunai	14,024	5	35.7
Kilinochchi	2,249	0	0.0
Kandy	26,244	8	30.5
Matara	12,582	4	31.8
Ratnapura	19,937	10	50.2
Kurunegala	26,182	11	42.0
Vavuniya	3,445	1	29.0
Galle	18,013	4	22.2
Gampaha	31,990	9	28.1
Trincomalee	8,597	2	23.3
Monaragala	9,022	6	66.5
Colombo	36,132	10	27.7
Jaffna	8,832	2	22.6
Kalutara	18,301	3	16.4
Matale	9,416	1	10.6
Mullaitivu	1,084	3	276.8

Fig 5.1.4 : Maternal Mortality Ratios by RDHS Area, 2014



MMR per 100,000 Live births

Source : Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

MMR by RDHS areas during year 2014 are illustrated in figure 5.1.4. The highest MMR for the year 2014 was reported from Mullaitivu district (03 deaths and 1,084 live births). There were no deaths reported from Mannar and Kilinochchi districts.

5.1.1.5 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 complementary 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 5.1.5, where approximately three fourth of estimated children in specified age groups had received it.

5.1.1.5.1 Under Nutrition among under Five Children

All relevant evidence based interventions to improve nutrition status are being implemented and growth monitoring and promotion of children under five is of priority concern of the National FHP. PHM assesses 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 breastfeeding 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.

Table 5.1.5 : Care for Infants and Pre Schoolers, 2008 - 2014

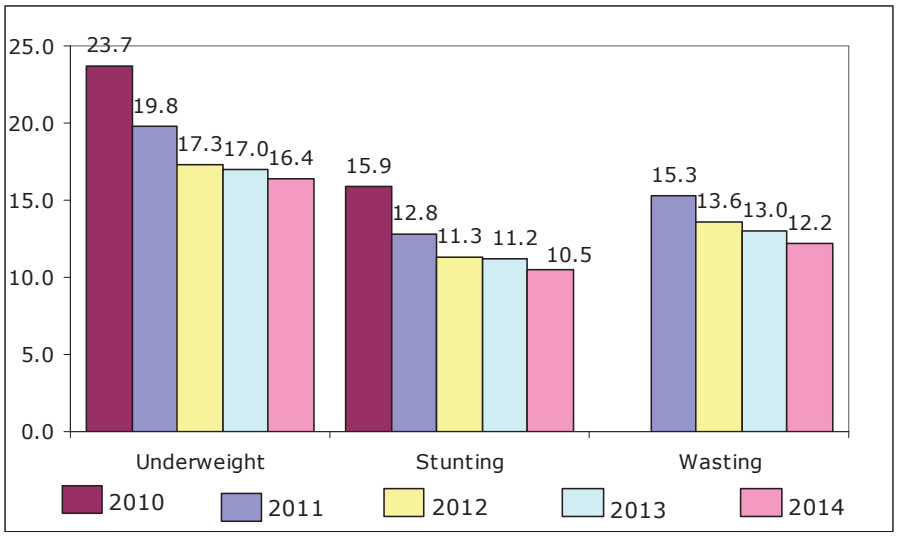
Indicator		2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Infants registered by PHMM		87.1	87.0	81.6	89.9	88.2	91.7	90.6
Infants making at least one clinic visit (out of registered infants)		99.7	99.6	98.3	97.9	100.0	99.6	99.6
Vitamin A supplementation given for estimated children at	6 months	93.0	79.5	75.4	80.3	76.4	68.9	68.8
	18 months	88.9	85.2	84.0	82.0	74.7	70.7	71.9
	3 years	86.5	83.7	87.5	85.3	78.8	71.4	73.1

Source : Maternal Mortality Surveillance - Family Health Bureau

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 – 2014, 92.6% of all under five children had been assessed for their growth.

The trends of under nutrition among under five children during the period from 2010 to 2014 according to nutrition month data are shown in Figure 5.1.5. It is heartening to note that the figures show a declining trend in all three indices, underweight (weight for age < -2SD), stunting (length/height for age < -2SD) and wasting (weight for length/height < -2SD) over the years.

Fig 5.1.5 : Under Nutrition among under Five Children from 2010 to 2014



Source : Nutrition month data - Family Health Bureau

5.1.1.5.2 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 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.

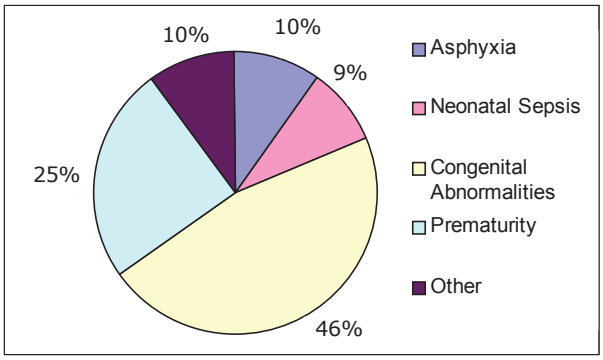
The main strategy used to achieve this aim is the enhancing of the capacity of parents on provision of appropriate early child care and psychosocial stimulation. This will be accomplished by providing the relevant knowledge and skills to parents through an instructional guide compiled into a booklet 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. Country specific development indicators, which are to be introduced, have been identified and measures are being taken to pilot test these indicators in Ampara district. These indicators once finalized will be included in the revised Child Health Development Record, and the screening check list for PHC workers. The second strategy relevant to special need care is the establishment and integration of a new institutional arrangement comprising primary and secondary child development centers. These institutions are supposed to provide appropriate care for the children diagnosed of social need conditions.

5.1.1.5.3 Under Five Child Mortality

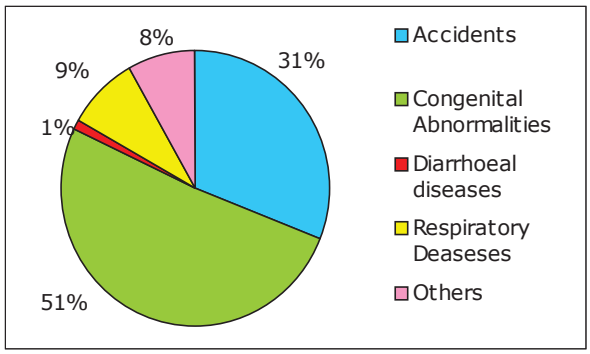
All under five deaths are reported by PHMs and field investigation of all deaths are done at field level by the Public Health Staff. Neonatal, infant and under five mortality reported for year 2014 by the field staff were 6.2, 8.6 and 9.9 per 1,000 live births respectively. Causes for infant and 1-5 year child deaths identified during field investigation are given in figures 5.1.6 and 5.1.7.

Fig 5.1.6 : Percentage Distribution of Causes of Infant Deaths, 2014



Source : MCH Quarterly Return - H 509 Family Health Bureau

Fig 5.1.7 : Percentage Distribution of Causes of 1 - 5 Year Child Deaths, 2014



Source : MCH Quarterly Return - H 509 Family Health Bureau

5.1.1.5.4 Feto-Infant Mortality Surveillance

FHB started perinatal death audits at specialized hospitals (with either paediatric or obstetric units) in the year 2006 in collaboration with Sri Lanka College of Paediatricians, Sri Lanka College of Obstetricians & Gynaecologists and other related professional bodies. These death audit meetings should be conducted every month with participation of all relevant stakeholders from both preventive and curative sectors. Hospital perinatal death data and minutes of the meeting should be sent to Maternal and Child Morbidity Mortality Surveillance Unit (MCMMSU) of FHB. In the years 2010 to 2013, hospital reporting was streamlined with the introduction of a new user-friendly format. Each obstetric or neonatal unit completes individual formats for each perinatal death. A tracking system was started to ensure timely receipt and completeness of monthly reports. Perinatal deaths reported to MCMMSU were analysed, action points identified and discussed at national level technical advisory committees to translate lessons learnt into actions or polices.

In the year 2014, 74 specialized hospitals (coverage 100%) reported 331,152 (94.7% coverage/live births reported by Registrar General's Department 349,715) live births and 2,947 perinatal deaths (1,354 still births and 1,593 early neonatal deaths). As such, country's still birth rate is 4.1 and perinatal mortality rate is 8.9 both per 1,000 total births. Number of deaths with a valid cause of death was 1,805 (61.2%).

Leading causes include; Prematurity (30.1), Birth Defects (19.7), Sepsis (16.0), Acute Respiratory Distress Syndrome (9.4) and Birth Asphyxia (4.9). Service deficiencies identified; issues in dating scans, delay in seeking care by pregnant mothers, shortage in supply of surfactants, inadequate capacity of medical officers in neonatal resuscitation and delays in transfer of newborns for more specialized care.

A pilot feto-infant mortality surveillance system is currently underway in the districts of Colombo and Gampaha which started from January 2014. The system consists of perinatal death audits at all specialized units and individual infant death investigations at both institutional and field levels.

5.1.1.5.5 Birth Defects Surveillance

Birth defects have assumed a leading cause of infant mortality (18%) in the country. Availability of quality birth defects data, utilizing such data effectively at different levels and dissemination to all stakeholders, facilitate effective birth defects prevention and control.

A national birth defects prevention and control action plan was formulated and a national Birth Defects Surveillance mechanism was developed. A pilot Birth Defects Surveillance was implemented in Southern Province (11 specialized hospitals) with the objective of scaling up to country-wide surveillance in coming years. Data are collected on to a web-based database maintained by Family Health Bureau. Preliminary data over one year has reported 419 cases up to 2 years. Leading causes were cardiac defects, chromosomal disorders, cleft lip/palate and gastro-intestinal defects with female predominance. Many mothers were in 20-35 year age group and a significant proportion (28%) are >35years.

5.1.1.6 Care for School Children

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, 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

According to Ministry of Education statistics for year 2013, Sri Lanka had approximately 4 million of school population and about 58% of them are in the adolescent age group (10-19 years). They were distributed among 10,012 government schools island wide and of these 52.2% of schools had less than 200 children enrolled.

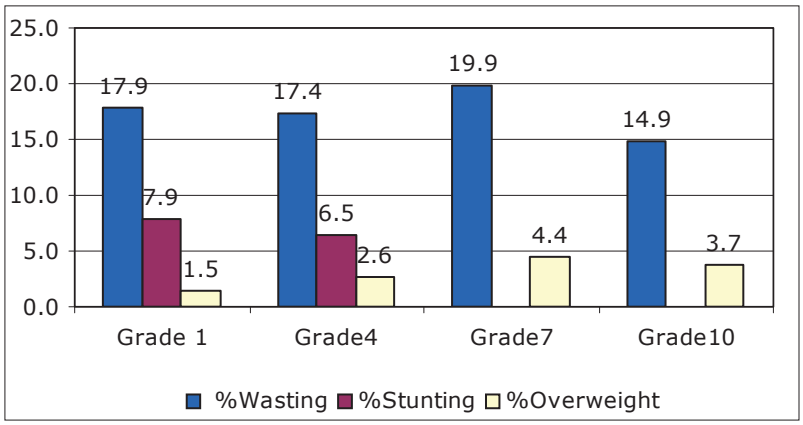
5.1.1.6.1 School Medical Services

SMI and referral of children identified of having defects 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.

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

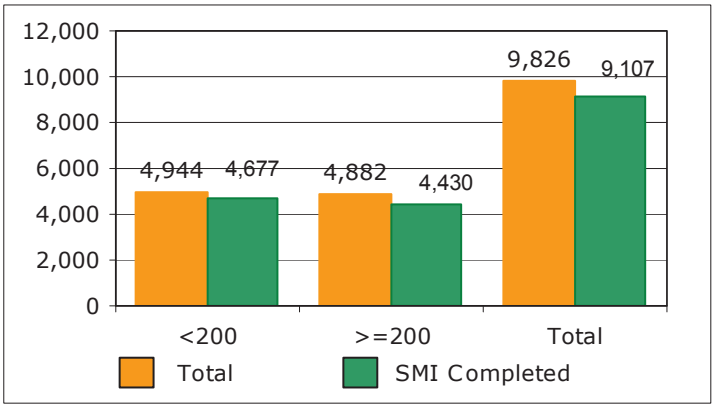
In 2014, only 300 out of 335 MOH areas (89.6%) submitted Quarterly School Health Returns (H 797) for all four quarters.

Fig 5.1.9 : Percentages of School Children in Different Grades with Stunting, Wasting and Overweight, 2014



Source : School Health Return - H 797 Family Health Bureau

Fig 5.1.8 : Total Number of Schools and Number of Schools where SMI were Conducted, 2014



Source : School Health Return - H 797 Family Health Bureau

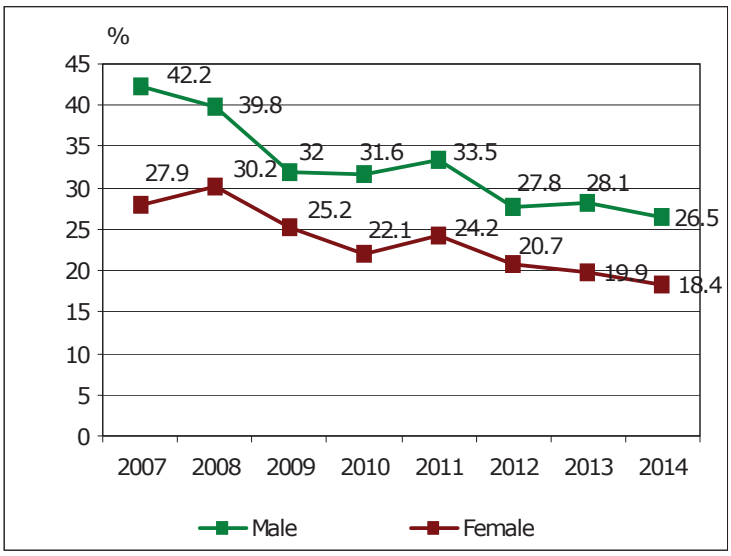
In addition, Body Mass Index (BMI) of all students in grade 10 is assessed and necessary nutritional interventions are done during the nutrition month each year. During year 2014, a total of 110,914 (88.7%) grade 10 students were assessed for their nutritional status and trends of prevalence of low BMI and overweight among male and female students were given in Fig 5.1.10 & 5.1.11.

There were 9,856 schools and 1,634,751 (to be examined) (enrolled 3,976,852) children under the purview of those MOH areas who reported their progress. The SMIs were conducted in 9,107 schools resulting in overall school coverage of 92.7%. The coverage of schools with less than 200 and more than 200 students were 94.6% and 90.7% respectively.

5.1.1.6.2 Malnutrition among School Children

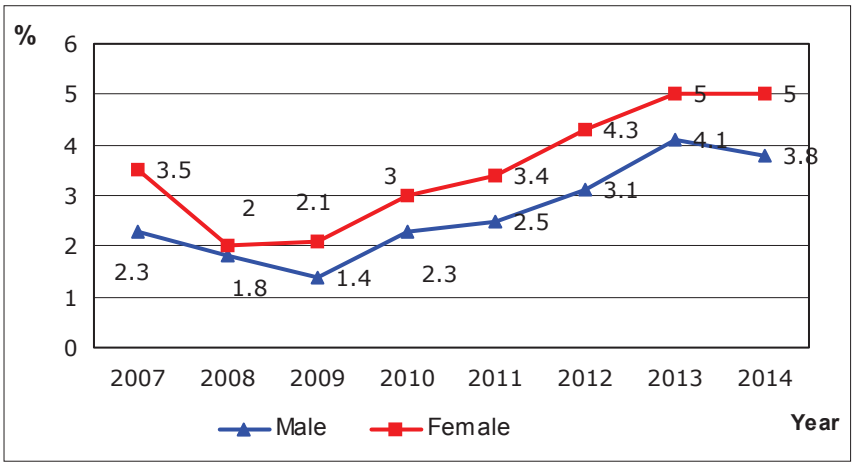
During SMIs students are assessed for their nutritional status. Stunting is assessed in grades 1 and 4 only. In 2014, 7.9% and 6.5% of children in grades 1 and 4 were stunted respectively. Wasting was higher compared to stunting in respective grades. The highest rate of wasting was reported among children in grade 7 (19.9%).

Fig 5.1.10 : Percentages of Grade 10 Children with Low BMI, 2007 - 2014



Source : School Health Return - H 797, Family Health Bureau

Fig 5.1.11 : Percentages of Grade 10 Children with Overweight, 2007 - 2014



Source : School Health Return - H 797, Family Health Bureau

Circular on adolescent sexual and reproductive health service provision has been issued after getting legal clarification from Attorney General. Guideline on adolescent sexual and reproductive health service provision is being drafted targeting reduction of teenage pregnancy which was 5.3% in 2014.

National Youth Survey has been completed and the report will be published soon.

5.1.1.6.3 Care for Adolescents

Considering the timely need of addressing health needs of the adolescents, a separate unit for "Adolescent Health" was established in Family Health Bureau, especially targeting out of school adolescents. National strategic plan on Adolescent Health was finalized and made available during 2013 in order to achieve the strategic objectives of adolescent health programme.

National Technical Advisory Committee with all relevant stakeholders was established. This is chaired by the Director General of Health Services and is being conducted once in three months.

Component of youth health was incorporated into it by Circular No-02-93/2014 dated 19/06/2014 issued by Director General of Health Services. Hence Family Health Bureau now catering for the health needs of the 10-24 year age group.

IEC materials on Teenage Pregnancy Prevention and tele-film on adolescent health nutrition were developed. Development of IEC package for Public Health Midwives and health web site for adolescents and youth of 15-24 year age group are in the process of development.

After initial need assessment, 3 day programme on Training of Trainers were conducted to improve capacity building of primary health care workers who are dealing with adolescents. These trainers train their district and divisional level staff.

5.1.1.7 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. At present it constitutes a vital component of the NFHP.

The programme offers a wide range of modern family planning methods enabling all couples to have a desired number of children with optimal timing. It also includes services for sub-fertile couples.

According to RH-MIS 65.8% of eligible families had been using a family planning method (current users) during year 2014. Proportions of modern method and traditional method users were 56.2% and 9.6% respectively. The trends in proportion of current users and unmet need for family planning among eligible families are given in Fig 5.1.12. An eligible family not expecting a child in next two years yet does not use any family planning method is considered as a family with unmet need.

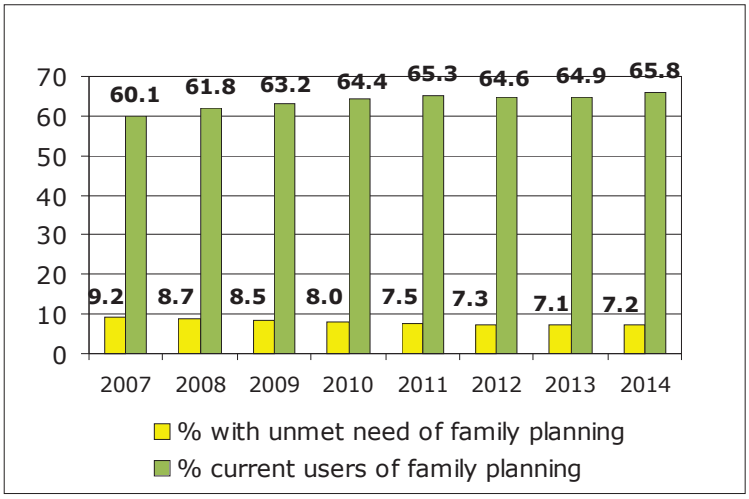
Sri Lanka records the best Family Planning performances in the region. However, since of late, stagnations can be observed.

The method mix of the family planning use among eligible families is given in Fig 5.1.13. Injectables were the most popular modern temporary method. However, there has been a 8% reduction in the injectable users since year 2011. Possible contributory factors include reporting of adverse reactions to certain brands of injectables resulting in disturbed supply chain. A large percentage of injectable users seems to have shifted to other hormonal methods.

5.1.1.8 Gender and Women's Health

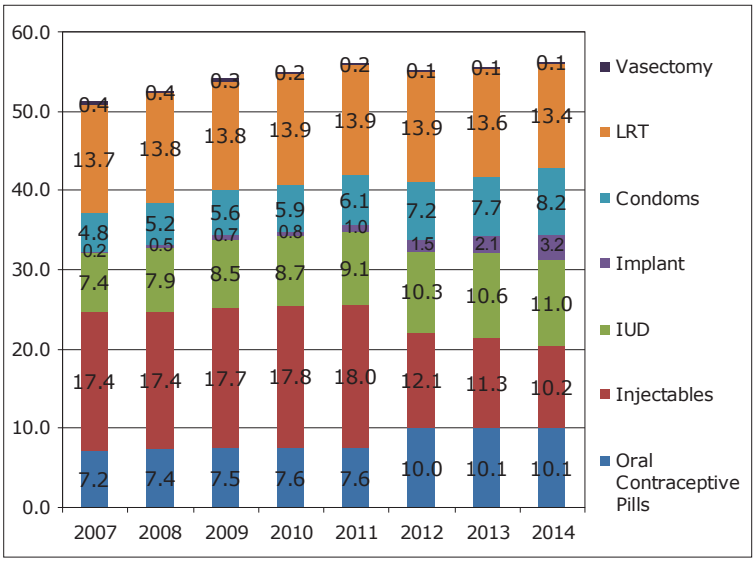
The Government of Sri Lanka was a signatory to the Program of Action adopted at the International Conference on Population and Development (ICPD) in Cairo in 1994. The concept of Reproductive Health (RH) has been introduced to the Family Health programme since then and the programme was reorganized to 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.

Fig 5.1.12 : Trend in Proportion of Current User and Unmet Need for Family Planning among Eligible Families, 2007 - 2014



Source : MCH Quarterly Return - H 509, Family Health Bureau

Fig 5.1.13 : Modern Family Planning Methods Used by Eligible Families, 2007 - 2014



Source : MCH Quarterly Return - H 509, Family Health Bureau

5.1.1.8.1 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 2014, 873 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. Women in 35-year age cohort are the special target population for cervical cancer screening with pap smear through well woman services.

The 35 year age cohort coverage with pap smear testing approximately 34.6% in 2014. The problems detected among the women screened at WWC for different NCDs are given in the table 5.1.6.

Table 5.1.6 : Clinic Attendance and Problems Detected at Well Woman Clinics, 2008 - 2014

Activity	2008	2009	2010	2011	2012	2013	2014
First time attendees							
Under 35 years	19.5	15.9	16.1	10.2	8.0	6.0	6.1
35 years	16.1	19.4	23.6	39.4	46.3	51.7	53.9
Above 35 years	64.4	64.7	60.3	50.4	45.6	42.3	40.0
35 year cohort coverage with pap smear screening	8.2	10.6	12.4	25.5	28.9	33.9	34.6
Cervical smears reported as high and low grade lesions	0.15	0.3	0.5	0.25	0.2	0.25	0.2
Cervical smears reported as malignant (Carcinoma)	0.02	0.02	0.06	0.04	0.02	0.04	0.03
Cervical smears reported HPV	0.3	0.2	0.5	0.2	0.1	0.1	0.2
Breast abnormalities detected	1.8	1.5	1.4	1.5	1.4	1.8	1.5
Diabetes Mellitus detected	2.2	2.1	2.0	1.8	2.0	2.0	1.8
Hypertension detected	4.4	3.9	4.0	4.0	3.7	4.1	3.6

Source : MCH Quarterly Return - H 509, Family Health Bureau

5.1.1.8.2 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.

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

Establishment of Gender-based Violence (GBV) care centers 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 be-friending services and referring them for other services, etc.

5.1.1.9 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 Servicers. The main aim is to improve oral health from early years of life.

5.1.1.9.1 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 7 in schools with more than 200 students and all students below the age of 13 years in schools with less than 200 students. In year 2014, the SDTs could screen 78% of the total children in the target group. Of the target group, 54% 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 24% of the target group (Table 5.1.7) which is the same for last two years. According to the data, the disease pattern of school children remains same. However, the dental caries percentage of permanent dentition has been increased from grade 4 to grade 7 by 11%.

However, the increase of caries in permanent dentition from Grade 4 to Grade 7 is still considered as a weakness of the programme, and is needed to be addressed in future. Gum diseases too show an increasing trend with age.

In 2014, there were 64 newly recruited SDT which is not included here. Mal-distribution of SDTs within & between districts, inadequate transport facilities to conduct outreach clinics, inconsistencies in workload of SDTs and problems of identification of oral diseases by the SDTs are main challenges faced by the School Dental Services.

5.1.1.11 Research in Family Health

Operational research provides evidence for policy and programmatic concerns.

A national survey on Adolescent and Youth Health was conducted during 2012/2013 with the objective of obtaining a profile of Sri Lankan adolescents 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 completed during 2013.

Table 5.1.7 : Work Performances of School Dental Services, 2013 and 2014

Year	Number of SDTT	Number of children per SDT	% of schools screened	% of caries				% of calculus			% of children screened[2]	Coverage percentage[3]
				Gr 1	Gr 4	Gr 4[1]	Gr 7[1]	Gr 1	Gr 4	Gr 7		
2013	380	3,323	62%	57%	59%	10%	19%	2%	15%	22%	64%	56%
2014	379	2,846	76%	58%	57%	7%	18%	2%	12%	19%	78%	69%

[1] Permanent teeth *Source : School Dental Return - Family Health Bureau*

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

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

5.1.1.9.2 Oral Health Care for Infants and Early Childhood

It has been identified high burden of dental caries among children under 3 years. The strategy was developed to educate parents, screen all 12 & 18 month old children for caries by PHC staff at child welfare clinics and refer those with early signs to nearest DSs for further management. The capacity building of PHC staff throughout the country has been done in 2013, and it is planned to monitor the progress of the programme in future.

5.1.1.10 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.

This survey comprised of facility assessment, morbidity estimation and assessment of knowledge of relevant health workers.

5.1.1.12 Training Programmes Conducted and the Fund Utilization by Family Health Bureau

Family Health Bureau conducts routine training programmes to increase the capacity of the public health staff to perform their tasks efficiently. Training programmes conducted during year 2014 are given in Table 5.1.8.

5.1.1.13 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. Table 5.1.9 gives the indicators used to assess those and the targets set for 2015.

Table 5.1.8 : Training Programmes Conducted and the Fund Utilization by FHB, 2014

No.	Title of the programme	No. of days	Year of commencing	No. of programmes per year	Category of participants eg. (PHM,PHI,PHNS, etc.)
1	Preconception care - TOT	2	2013	14	MOH
2	Maternal care package	2	2012	For all districts refresher training thereafter	
3	Essential newborn care course with neonatal advanced life support - TOT	5	2007	4	Pediatricians, VOGs, Medical Officers, Nurses, Midwives
4	Breastfeeding counseling course - TOT	5	2010	4	Pediatricians, VOGs, Medical Officers, Nurses, Midwives
5	Baby friendly hospital - TOT	3	2010	4	Pediatricians, VOGs, Medical Officers, Nurses, Midwives
6	Labour room management - TOT	2	2011	4	Labour Room in charge Nurses, MOMCHs
7	Infant and young child feeding	6	2014	2	MOMCH, MOH, RSPHNO, PHNS, SPHM
8	Growth monitoring and promotion - TOT	3	2014	2	do
9	Training programme on nutrition rehabilitation	2	2014	2	Paediatrician, SHO, MO
10	Early child development	3	2014	50	MOH, PHN, PHMs
11	Adolescent health	2	2008	8	MOMCH, MOH, PHNS, SPHI, PHI, Counseling Officers of Social Service Dept., Instructors of Youth Corp, ISA – Education Dept.
12	Life skills	3	2008	8	MOMCH, MOH, PHNS, SPHI, PHI, Counseling Officers of Social Service Dept., Instructors of Youth Corp, ISA – Education Dept.
13	School medical inspection	2	2011	8	MOH Staff, MOMH
14	Public health officers on oral health - TOT	23	2013	23	All MOHs, All PPHNS, All SSDT, SPHM (when PHNS not available), PHI
15	Insertion of IUDs - TOT	1		3	MOOH, MOO, RMOO, AMOO, PHNSS
16	Insertion of implants - TOT	1		4	MOOH, MOO
17	Updates on reproductive health – hospital based - TOT	1	2013	6	MOO, MOOH, NSS, PHNSS, NOO
18	Counselling on family planning - TOT	1	2014	4	MOOH, MOO, RMOO, AMOO, PHNSS
19	Training programmes (Mithuru Piyasa)	4	2013	7	Hospital staff
20	Programme planning	5	2012	2	Provincial CCPs, MOMCH, MO - Planning, RE
21	Supervision	3	2011	For all districts refresher training thereafter	MOMCH, MOH, RSPHNO, SPHID, PHNS, SPHI
22	Training on Reproductive Health Management Information System (RH-MIS)	1	2014	For all districts refresher training thereafter	MOMCH, MOH, RSPHNO, SPHID, PHNS, SPHI, PHM, PHI
23	MCMMSU conducted training programmes on Integrated Management of Common Childhood Illness (IMCI) for first contact physicians in Kalutara and Colombo districts in the year 2014. This program was supported by WHO.				

Table 5.1.9 : Targets for Millennium Development Goals 1, 4 and 5

Goal		Target	Indicator	Baseline	Current	Target (2015)
Goal 1	Eradicat	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 1,000 live births)	22.2 (1991)	10.0 (2013) [1] (Provisional)	8
			Infant Mortality Rate (Per 1,000 live births)	17.7 (1991)	8.2 (2013) [1] (Provisional)	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)	32.0 (2014) [3]	23
			Proportion of births attended by skilled health personnel	94% (1993)	98% (2006/7) [2]	99%
		5B : 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)	36 per 1,000 women (2012)[4]	24
			Proportion of teenage pregnancies		4.9% (2013)[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%

Source : 1 Registrar General's Department, 2 DHS 2006/07, 3 Family Health Bureau, 4 Census of Population and Housing, 2012

5.1.2 Directorate of Environmental and Occupational Health

The Directorate of Environmental and Occupational Health (E&OH) is responsible for the implementation of the following public health programmes of the Ministry of Health.

1. Environmental Health
2. Occupational Health and Safety
3. Food Safety and Hygiene

This Directorate functions under Deputy Director General (Public Health Services 1) and is responsible for planning, coordination, direction, monitoring and evaluation of environmental health, occupational health and food safety programmes. Additionally the Directorate liases with the Ministry of Environment and Mahaweli Development, Central Environmental Authority, Ministry of Labour and Labour Relations and other relevant stakeholders in addressing environmental and occupational health related issues.

The roles and responsibilities of the Directorate of E&OH can be broadly classified as follows.

- Advocate and provide technical guidance to the Ministry of Health and other relevant ministries on policy in relation to environmental health, occupational health and food safety
- Develop strategies based on national policies
- Formulate national medium term and annual action plans
- Develop E&OH programmes based on evidence
- Strengthen intersectoral coordination between government, private and nongovernmental agencies in the areas of environmental and occupational health and food safety
- Direct, guide, coordinate, support and monitor the provincial/district system/managers to implement activities on E&OH and food safety
- Build capacity of relevant staff at pre service, in service and post graduate level on E&OH
- Conduct operational research in the areas of E&OH

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 2014.

5.1.2.1.1 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 importance of consuming safe water. Water quality surveillance is carried out by Ministry of Health in collaboration with the National Water Supply and Drainage Board and other relevant stake holders. Public Health Inspectors send water samples routinely for testing of microbial parameters and in special instances.

5.1.2.1.2 Health Care Waste Management

World Bank funded second Health Sector Development Project is in operation from 2014 – 2018, where healthcare waste management has been included in the project. Under this project, Rs. 130 million was provided to 12 hospitals with the evaluation of proposals, to improve healthcare waste management facilities in order to obtain Environment Protection License (EPL) & Scheduled Waste Lisence (SWL).

Needs assessments, waste audits, procurement of equipment, infrastructure development, (eg. construction of waste storage), installation of hazardous waste treatment facilities, improvement of waste water & sewerage systems were carried out utilizing these funds.

Proposals were evaluated and approved to establish environmental friendly healthcare waste treatment facilities on cluster basis, island wide. Budgetary allocations were provided for healthcare waste management under regular budget for hospitals under the central government. Technical guidance, provision of policy directions and inspections were carried out throughout the year as and when required.

In addition, two training programmes were carried out in collaboration with Department of Community Medicine, Faculty of Medicine, Colombo for 60 participants.

5.1.2.1.3 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 international conventions on Basel, Stockholm and Rotterdam to strengthen the environmental health conditions in this country.

5.1.2.1.4 Capacity Building of Health Staff on Environmental Health

Public Health staff was trained on current environmental issues such as climate change, indoor air pollution, water pollution, chemicals management, 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 healthcare waste management issues and sixty participants were trained. Four training programmes were carried out in TH- Kandy, TH- Karapitiya, GH- Matara and BH- Medirigiriya for 160 participants.

5.1.2.1.5 Development of IEC Material on Environmental Health

Reviewed and printed 250 copies of the booklet on environmental health and printed a poster on climate change. Twenty exhibition panels were made on environmental, occupational health & food safety.

5.1.2.1.6 Climate Change and Health

Contributions were done to develop the chapter on climate change of the Haritha Lanka Programme and Action plan on climate change.

5.1.2.1.7 Post Graduate Training

Students attached to Post Graduate Institute of Medicine, Colombo, following MSc in Community Medicine were trained on environmental health.

5.1.2.2 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 recognizes that the health of workers amounting to approximately 8.5 million at present is an integral part of general health and daily life.

The Directorate of E&OH has embarked on a programme to develop occupational health of all workers in workplaces 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

Occupational accidents affecting significant number of workers and surrounding communities are considered as disasters and curative sector response is carried out immediately. 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.

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.

It is planned to establish environmental and 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. Cadre approval was obtained from the Management Services Department for 26 Medical Officers (Environmental and Occupational Health) to be appointed at RDHS level.

The Directorate of Environmental and Occupational Health has carried out several activities to strengthen the occupational health programme in the year 2014.

5.1.2.2.1 Development of National Occupational Safety and Health Policy

Ministry of Health contributed to the development of the National Occupational Safety and Health Policy and it was launched in June 2014. Ministry of Labour and Labour Relations and Ministry of Health are considered joint stakeholders in the implementation of this policy. An action plan based on this policy has been developed for the period of 2014 to 2016 which has received cabinet approval. The National Occupational Safety and Health Policy aims to prevent occupational injuries and diseases and promote safety and health culture within workplaces.

5.1.2.2.2 Capacity Building of Provincial and District Level Public Health Staff on Occupational Health and Safety

Four training programmes on occupational health and safety for Medical Officers of Health (MOOH) and Additional Medical Officers of Health (AMOOH) were conducted. It is intended to address occupational health issues of the informal sector as well as small scale industry workers through them. Sixty MOOH and AMOOH in Anuradhapura, Batticaloa and Kilinochchi districts were trained.

Occupational health and safety training for Supervising Public Health Inspectors (SPHII) and Public Health Inspectors (PHII) were conducted at regional level. Hundred and fifty SPHII and PHII in Trincomalee, Kalmunai, Anuradhapura, Badulla and Nuwara Eliya districts were trained.

5.1.2.2.3 Conducting Operational Research to Plan Interventions on Occupational Health and Safety

A survey was conducted to develop a human resource plan to strengthen environmental and occupational health service delivery in Northern and Eastern Provinces of Sri Lanka and the final report was prepared. Cadre requirements and the training needs have been identified especially for the Public Health Inspectors.

Additionally client perceptions were assessed with regards to food safety, environmental and occupational health to further improve the service delivery in these areas.

5.1.2.2.4 Review on Environmental and Occupational Health and Safety

A national level review was conducted on environmental and occupational health and the progress was assessed on district basis.

5.1.2.2.5 Awareness Raising on Occupational Health and Safety among Different Categories of Workers

Occupational health and safety awareness was done for workers in Katunayake BOI zone. Contribution was made to "Dayata Kirula" exhibition by organizing a stall on environmental and occupational health.

5.1.2.2.6 Symposia on Occupational Health and Safety

Two awareness raising sessions were conducted for Public Health Medical Officers in Kilinochchi and Matara RDHS areas to stress the importance of provision of occupational health and safety for workers.

5.1.2.2.7 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 was carried out.

5.1.2.2.8 Inter Sectoral Coordination

Strengthening inter sectoral coordination is essential in the field of occupational health. Several activities were carried out with the Ministry of Environment, Ministry of Labour, Ministry of Education and Water Resources Board.

- Chemical Accident Prevention and Preparedness Programme of CEA
  Contributed to the development of chemical accident prevention and preparedness project carried out by the Central Environmental Authority

5.1.2.3 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 24 food regulations framed under the Food Act. The Act is currently being further amended.
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 relating to food safety.

5.1.2.3.1 Vision

The people of Sri Lanka to have a healthy and productive life through availability of safe food for human consumption.

5.1.2.3.2 General Objective

To ensure the availability of safe, wholesome and honestly presented food supply for human consumption.

5.1.2.3.3 Specific Objectives

I. Improve the knowledge and awareness among general public (consumers) on food safety measures including food hygiene.

II. **Enhance the knowledge, skill and attitude of relevant officers** to enable them to effectively and efficiently carry out food safety activity and monitoring, including regulatory activities.

III. **Strengthen the linkage with other Line Ministries**, Provincial Authorities, International Agencies, NGOs, etc. to bring about effective, sound environmental management conducive food safety and hygiene.

IV. **Formulate/review national policies, regulatory frame-work, regulations** or amend/modify them to suit the current/ emerging requirements and needs of the country and to improve existing conditions and also to meet future challenges.

V. Carry out **awareness programmes** on food safety for **health workers**, **consumers**, **food manufacturers** and **food handlers** throughout the country.

VI. Improve coordination of food safety related activities with the

- Ministry of Agriculture,
- Commerce and Consumer Affairs,
- Rehabilitation,
- Department of Customs,
- Coconut Development Authority,
- Sri Lanka Tea Board,
- SLSI,
- FAO/WHO,
- UNIUCEF,
- AEA,
- Chamber of Commerce,
- Iodated Salt Manufacturing Establishment and other trade sectors

VII Facilitate the functions and/or serve in the following committees

- Food Advisory Committee (FAC)
- Food Advisory Sub Committee (FASC)
- Food Advisory Special Sub Committee (FASSC)
- Regulation Formation Sub Committee
- Labelling and Advertisements Monitoring Sub Committee
- National Codex Committee
- Regional Codex Committee for Asia
- SPS Enquiry Point
- IDD Steering Committee
- BSE Committee

5.1.2.3.4 New Food Regulations

Several Food regulations were reviewed/framed and drafted during the year 2009/2014. Review of all the current regulations has been completed and the following regulations were published.

a) Food (**Colouring Substances**) Regulations
b) Food (**Vinegar**) Regulations
c) Food (**Adoption of Standards**) Regulations
d) Appointment of Additional Approved Analyst, Colombo Municipal Council
e) Appointment of Additional Approved Analyst, (Microbiology) Colombo Municipal Council
f) Food (**Antioxidants**) Regulations
g) Food (Melamine in Food Products) Regulations
h) Food (Formaldehyde in Fish) Regulations
i) Food (**Packaging Materials**) Regulations
j) Food (Hygiene) Regulations
k) Food (Shelf Life in Imported Food) Regulations
l) Food (Labeling and Advertising) Regulations
m) Food (Iodization) Regulations
n) Food (Bottled or Package Water) Regulations
o) Food (Control, Labeling and Sale of GM Food) Regulations
p) Food (Bread Standards) Regulations (Amendment)
q) Food (Packaging Material and Article) Regulations
r) Food (Irradiation) Regulations
s) Food (Additives/Flavoring and Flavor Enhancers) Regulations
t) Food (Sweetener) Regulations

The following regulations have been reviewed for the publication. The legal draftsmen being consulted for the finalization of these regulations.

a) Food (Amendment of Shelf Life of Imported Food Items) Regulations
b) Food (Amendment of Irradiation) Regulations
c) Food (Amendment of Bottle Water) Regulations
d) Food (Amendment of Labelling & Advertisement) Regulations
e) Food (Amendment of Iodized Salt) Regulations
f) Food (Milk & Milk Products) Regulations

The following regulations have been reviewed under a special (WHO) programme for Publication. The legal draftsman is being consulted for finalization of these regulations:

a) Food (Meat & Meat Products) Regulations
b) Food (Fish & Fish Products) Regulations
c) Food (Sugar & Sugar Products) Regulations
d) Food (Additives - Emulsifying Agents) Regulations
e) Food (Additives – General) Regulations
f) Food (Tea, Coffee, Cocoa and their Products) Regulations

5.1.2.3.5 Publications Prepared by the FCAU

- Publication of all Food Regulations in a book form; (Published)
- Publication of a Manual for Training of Food Handlers; (Draft)
- Publication of a Food Sampling Manual; (Draft)
- Publication of Policy Guide Line for Fortification of Food (Published)

5.1.2.3.6 Enhance the Knowledge, Skills and Attitudes of Authorized Officers

- 5 days training program on Food Safety for PHII (No. of programmes - 04)
- In-service training programme on Health Skill Development in Food Hygiene for PHII (No. of programmes - 10)
- Review of the work performance with F & Di & SPHII (D) (No. of programmes - 02)

5.1.2.3.7 Formulate/Review National Policies and Regulatory Framework, Regulation

- No. of Food Advisory Committee Meetings - 13
- No. of Food Advisory Sub Committee Meetings - 21
- No. of Labeling & Advertising Sub Committees - 11

5.1.2.3.8 Registration of Bottled of Packaged Water Manufacturing Premises

- No. of applications received - 42
- No. of assessment carried out - 42
- No. of premised registered - 42
- Total amount of collected fees credit to the consolidated fund – Rs.42,000/=

5.1.2.3.9 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.

- No. of application received - 23
- No. of application for renewals - 23
- No. of inspection carried out - 47
- No. of permits issued - 23

5.1.2.3.10 Activities Carried out by Provincial Health Staff (2014)

- Food samples taken - 17,957
- No. of samples satisfy - 11,011
- Un satisfactory - 4,340
- No. of cases filed - 6,659
- Amount of fines (Rs. Million) - 25.95

Table 5.1.10 : Health Education Programmes Conducted by Authorized Officers for the Owners, Food Handlers and Consumers

Team	No. of programmes	No. of participants
Owners and food handlers of food handlers establishment	4,627	74,983
Field officers	782	15,891
Community	4,472	352,840
Teachers and students in schools	4,234	132,643

5.1.2.3.11 Imported Food Inspection Unit:

- No. of consignments inspected (FCL) - 29,763
- No. of consignments inspected (LCL) - 3,561
- No. of samples taken - 8,077
- No. of consignments rejected - 18

5.1.2.3.12 Issue Export Certificates for Export Food Consignments

- No. of certificates issued - 8,222
- No. of factories visited - 63
- Revenue collected to the consolidated fund (Rs. Million) - 8.24

5.1.3 Epidemiology Unit

The Epidemiology Unit has broad expertise in prevention and control of communicable disease and public health research. Its core skills of epidemiology and disease surveillance, support extensive research programmmes aimed at, preventing illness and improving quality of life.

Epidemiology Unit is also the focal point for implementation of the National Immunization Programme (NIP). It is responsible for developing policy and strategies for vaccine introduction, coordinating the provision of logistics, supplies of vaccines and injection safety items, monitoring and evaluation of the NIP.

Moreover, the Epidemiology Unit is the focal body as the emergency response unit for communicable disease control activities in disasters, emergencies and outbreaks in the country. In addition the unit is not only involved in training medical postgraduates and health staff, but serves as an international training centre on disease prevention and control. The Epidemiology Unit monitors and evaluates the effectiveness of all activities and act accordingly while collaborating with other institutions in the country as well as with relevant international agencies.

5.1.3.1 Disease Prevention and Control

Disease surveillance is one of main strategies in prevention and control of communicable diseases. It involves disease control through regular collecting, analyzing and disseminating epidemiological data for timely action. Thus it helps to face the challenges of public health emergencies of disease outbreaks. In addition surveillance of Chronic Kidney Disease (CKD) is another responsibility that has been entrusted to the Epidemiology Unit since of late.

5.1.3.1.1 Chickenpox

A total of 4,338 cases of chickenpox were reported in 2014 and 3,744 (86.3%) were clinically confirmed. Kurunegala (475), Galle (422), Colombo (418), Gampaha (282) and Kegalle (267) were the leading districts reporting chickenpox. Highest reported age category was 20 – 30 years (30%). Secondary bacterial infection (16) , Pneumonia (8) and Myocarditis (5) were the leading complications identified.

5.1.3.1.2 Cholera

No cases of cholera were reported during the year 2014. The last case was reported in 2003.

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

During the year 2014, 47,502 cases of DF/DHF and 97 deaths were reported with a CFR of 0.2%. According to special surveillance data from hospitals, the highest number of cases were from age group of 25-49 years (37.7%) followed by 15-24 years (27.7%) and 5-14 years (18.5%).

Out of the total reported cases, Dengue Fever (DF) were 92.5%, while 7.5% were Dengue Haemorrhagic Fever (DHF). However, the proportion of DHF in the Western Province was 12%.

During the year 2014, blood samples of 4,395 patients were tested using IgM capture ELISA test at the Department of Virology, MRI, out of which 2,238 (51.9%) samples were confirmed as positive for dengue.

5.1.3.1.4 Dysentery

In the year 2014, a total of 4,832 cases of dysentery were reported. Jaffna (1,039), Batticoloa (398) and Nuwara Eliya (307) were the leading districts reporting dysentery. Among the 3,376 cases which were clinically confirmed, the largest proportion (33.7%) belonged to the age group of 1-4 years.

5.1.3.1.5 Enteric Fever

A total of 1,072 cases of enteric fever were reported in 2014. The district of Jaffna had reported the highest number of cases (325), followed by Colombo (122). Among the 738 cases which were clinically confirmed, 27.6% belonged to the age group of 5-14 years.

5.1.3.1.6 Human Rabies

Twenty (20) cases of human rabies were reported in 2014. Gampaha (05) and Puttalam (03) were the leading districts which reported human rabies cases. The largest number of cases belonged to the age group of 50-59 years (31.25%).

5.1.3.1.7 Influenza

Influenza surveillance in humans and animals is conducted in the country as a 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. Total ILI visits reported in the year 2014 was 33,029 and proportion of ILI out of total OPD visits was 14.09%. Total SARI visits reported was 2,104 and the proportion of SARI out of total admissions was 3.19%.

5.1.3.1.8 Japanease Encephalitis

During the year 2014, 191 cases of clinically suspected encephalitis cases were reported and 115 cases were clinically confirmed as encephalitis during field investigations. Sixteen were lab confirmed as japanese encephalitis.

5.1.3.1.9 Leishmaniasis

The number of notified cases of leishmaniasis in 2014 was 1,367 . Anuradhapura had the highest number (417) reported, followed by Hambantota (375), Polonnaruwa (153), Kurunegala(152) and Matara (94). Out of the total number reported 1,059 were clinically confirmed. A proportion of 62% were males and the largest proportion of 61.3% belonged to the age group of 15-50 years.

5.1.3.1.10 Leptospirosis

A total of 3,235 cases and 41 deaths (CFR = 1.3%) due to leptospirosis were notified in 2014. The majority of cases were males (87%) and the majority belonged to the age group of 25-49 years (53.63%). Leptospirosis control and preventive strategies were implemented island wide, including Doxycycline prophylaxis. Doxycycline prophylaxis is a strategy recommended for well recognized high risk groups.

5.1.3.1.11 Measles

Three thousand one hundred (3,100) suspected cases of measles were reported during 2014 and 2,176 cases were clinically confirmed. Number of measles cases has remained relatively low since the year 2000 even though an unexpected outbreak was experienced in year 2013. In 2014, 37.82% of the affected belonged to less than 01 year age group and the second highest was in the age group of 25-49 (25.46%). The majority was reported from Colombo, Gampaha and Kurunegala.

5.1.3.1.12 Mumps

A total of 660 cases of mumps were reported and 510 (77.3%) were clinically confirmed in year 2014. The districts reporting the highest number of cases were Ampara (79), Jaffna (56), Anuradhapura (55), Galle (45), Kurunegala (43), Kegalle (43) and Matara (37). Majority was males (52%). The age category reporting the highest number of cases was 25-49 years (27.4%). Complications of mumps were one case of orchitis and one case of deafness.

5.1.3.1.13 Poliomyelitis Eradication: Acute Flaccid Paralysis (AFP) Surveillance

Sri Lanka has been free of poliomyelitis since 1993. Surveillance of Acute Flaccid Paralysis (AFP) is carried out with the objective of identifying any potential poliomyelitis cases which may present as AFP. A total of 89 non polio AFP cases were notified to the Epidemiology Unit in 2014 and non polio AFP rate was 0.43 per 100,000 population aged less than 15 years.

5.1.3.1.14 Rubella

Sixteen (16) suspected cases of rubella were reported during 2014 and 12 of them were confirmed and compatible with surveillance case definition - "fever and maculopapular rash, conjunctivitis, lymphadenopathy, arthralgia or arthritis".

5.1.3.1.15 Congenital Rubella Syndrome (CRS)

There were 1,168 of blood samples tested for rubella IgM at MRI, sent from hospitals and specialized units taken from babies with congenital abnormalities, from mothers with history of fever and rash during pregnancy and from samples of TORCH screening. Out of the total samples tested 4 babies were positive for rubella IgM antibody, out of which 3 were compatible with clinical signs and symptoms of CRS and the remaining baby was categorized as CRI (Congenital Rubella Infection).

5.1.3.1.16 Tetanus

A total 14 tetanus cases were reported in 2014 with a male predominance (55.5%). Jaffna (3), Kurunegala (2) and Rathnapura (2) were the districts which notified the highest number of cases. Ten cases of tetanus were clinically confirmed.

5.1.3.1.17 Viral Hepatitis

A total of 2,056 cases of viral hepatitis were reported: Ratnapura (472), Gampaha (277), Kegalle (270), Kandy (227), Badulla (168) and Matale (141) were the leading districts reporting. Among the 1,697 clinically confirmed cases, 56.4% were males and 43.3% belonged to the age group of 25-49 years.

5.1.3.1.18 Whooping Cough

A total of 81 clinically suspected whooping cough patients were reported in year 2014. Out of which 54 cases were clinically confirmed and 38 special investigations were performed. Majority of patients (60.87%) belonged to the age group under 01 year.

5.1.3.2 National Immunization Programme

The National Immunization Programme maintained near 100% coverage for all childhood vaccines adhering to high quality standards.

The Epidemiology Unit organizes and carries out regular training on all aspects of the National Immunization Programme for both preventive and curative sector staff. Training is based on WHO Middle Level Managers (MLM) training module.

It should be remarkably emphasized that vaccine storage capacity ensuring efficient cold chain maintenance at national, district and divisional levels is being continued and monitored closely.

An electronic monitoring system is in place in addition to other monitoring devices for cold chain maintenance thus ensuring vaccine quality.

The Web Based Immunization Information System (WEBIIS) incorporate all 338 MOH Offices entering EPI (Extended Programme of Immunization) data online to the system. Forty four hospitals, out of 71 hospitals where births take place enter data, on registration of births to the system online. Moreover relevant training has been completed on entering vaccine stock maintenance at 26 Regional Medical Supplies Divisions and execution of activities has been commenced.

An immunization coverage assessment survey, to validate the reported coverage, was conducted in 30 selected clusters in districts of kilinochchi and Mullaitivu, based on WHO immunization cluster survey methodology. The survey depicted, near 100% coverage of all infant and childhood immunizations.

Table 5.1.11 : Distribution of Notified Cases of Selected Notifiable Diseases by RDHS Division, 2014

RDHS Division	Dengue	Dysentery	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Typhus Fever	Viral Hepatitis
Colombo	14,711	167	15	122	320	-	225	3	63
Gampaha	8,811	145	11	42	32	5	463	25	277
Kalutara	2,631	165	11	62	84	1	375	4	24
Kandy	2,336	108	7	47	20	1	85	86	227
Matale	649	87	3	21	19	1	47	7	141
Nuwara Eliya	314	307	3	22	72	-	37	64	45
Galle	1,224	126	7	9	33	1	246	117	17
Hambantota	665	69	7	11	16	-	96	71	19
Matara	748	101	4	23	21	-	128	75	59
Jaffna	1,839	1,039	10	325	75	-	17	459	18
Kilinochchi	90	145	3	31	-	-	1	23	1
Mannar	359	70	10	40	9	-	4	28	3
Vavuniya	142	117	2	81	32	-	10	14	5
Mullaitivu	134	82	1	15	26	2	13	13	-
Batticaloa	970	398	3	38	33	1	17	3	8
Ampara	158	86	1	4	18	-	24	13	5
Trincomalee	661	87	2	7	14	-	20	27	3
Kurunegala	2,464	166	28	23	33	1	161	53	72
Puttalam	916	99	3	15	12	3	65	28	7
Anuradhapura	632	296	6	4	64	1	177	32	19
Polonnaruwa	558	82	5	7	2	-	85	8	12
Badulla	1,113	225	9	16	17	-	56	118	168
Monaragala	313	123	4	8	33	2	107	158	120
Ratnapura	2,823	247	25	35	34	1	463	108	472
Kegalle	1,724	107	10	58	34	-	310	63	270
Kalmunai	517	188	1	6	83	-	3	-	1
Sri Lanka	47,502	4,832	191	1,072	1,136	20	3,235	1,600	2,056

Source : H399 Notified

Table 5.1.12 : Age Distribution of Selected Notifiable Diseases, 2014

Age Group	Chicken Pox	Dengue*	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Measles	Meningitis	Mumps	Rubella	Tetanus	Viral Hepatitis	Whooping Cough
Under 1	71	55	502	4	3	-	1	823	273	4	2	-	-	28
1 - 4	176	2,089	1,138	21	95	-	5	292	180	64	3	-	18	5
5 - 14	476	7,667	731	34	204	2	55	125	189	134	1	-	236	9
15 - 24	938	11,505	213	11	124	2	315	375	38	104	4	-	601	2
25 - 49	1,600	15,664	349	20	199	4	1,212	554	61	181	3	-	735	2
50 - 59	159	2,720	118	7	63	5	429	6	23	14	-	3	57	-
60 and above	93	1,795	180	18	54	3	243	1	18	2	-	3	22	-
Total	3,513	41,495	3,231	115	742	16	2,260	2,176	782	503	13	6	1,669	46

* The source of dengue cases were from hospital e-surveillance system

Source : H411a Clinically Confirmed Cases

Table 5.1.13 : Distribution of Selected Notifiable Diseases by Month, 2014

Month	Chickenpox	Dengue	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Measles	Meningitis	Mumps	Rubella	Tetanus	Viral Hepatitis	Whooping Cough
January	464	3,610	388	24	134	2	292	497	133	102	1	2	127	8
February	493	2,011	319	21	77	0	199	383	70	57	0	1	117	4
March	594	1,648	234	28	84	1	243	428	67	64	7	3	146	3
April	399	1,682	217	14	64	3	119	283	55	53	2	1	119	4
May	478	4,292	304	11	69	6	191	285	88	60	1	1	193	4
June	263	6,736	342	14	61	3	199	165	105	47	1	0	156	3
July	246	5,721	275	12	48	0	159	244	106	54	0	1	155	6
August	288	4,022	352	20	75	2	173	299	157	69	1	2	270	8
September	225	2,640	349	13	67	1	269	171	93	35	2	0	187	11
October	298	4,297	690	14	141	1	495	154	86	48	1	1	274	16
November	245	5,452	771	8	114	1	483	125	92	38	0	1	175	12
December	345	5,391	591	12	138	0	413	66	62	33	0	1	137	2
Total	4,338	47,502	4,832	191	1,072	20	3,235	3,100	1,114	660	16	14	2,056	81

Source : H399 Notified

Table 5.1.14 : Cases, Incidence, Deaths and Case Fatality Rate (CFR) of Dengue Fever(DF)/ Dengue Haemorrhagic Fever(DHF), Leptospirosis and Encephalitis, 1996 - 2014

Year	DF/DHF				Leptospirosis				Encephalitis			
	Cases		Deaths	CFR (%)	Cases		Deaths	CFR (%)	Cases		Deaths	CFR (%)
	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
2013	32,063	156.5	89	0.3	4,308	21.0	80	1.8	357	1.7	31	8.7
2014	41,495	201.2	97	0.2	3,235	15.7	41	1.3	191	0.9	17	8.7

Incidence Rate = Incidence Rate per 100,000 population
CFR = Case Fatality Rate
ND = No Data

Source : H399 Notified

Table 5.1.15 : Cases and Deaths of Dengue Fever/Dengue Haemorrhagic Fever and Leptospirosis by Age Group, 2014

Age Group	Dengue				Leptospirosis			
	Cases		Deaths		Cases		Deaths	
	No.	%	No.	%	No.	%	No.	%
Under 1	55	0.13	2	2.06	1	0.04	-	-
1 - 4	2,089	5.03	5	5.15	5	0.22	-	-
5 - 14	7,667	18.48	18	18.56	55	2.43	-	-
15 - 24	11,505	27.73	13	13.40	315	13.93	3	7.32
25 - 49	15,664	37.75	46	47.42	1,212	53.62	12	29.27
50 - 59	2,720	6.56	7	7.22	429	18.98	11	26.83
60 and above	1,795	4.33	6	6.19	243	10.75	15	36.59
Total	41,495	100.00	97	100.00	2,260	100.00	41	100.00

Source of information for leptospirosis is from H399 and for dengue is from hospital e-surveillance system

Table 5.1.16 : Incidence of Extended Programme of Immunization (EPI) Target Diseases, 1955 - 2014

Year	Diptheria		Measles		Poliomyelitis		Tetanus		Tetanus Neo-Natarum		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	1.3	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	-	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	-	188	1.3	10	4.7	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	-
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	-	10,016	48.1	48	-
2007	-	-	37	1.2	-	-	16	0.1	-	-	9,817	47.9	21	0.1
2008	-	-	2	-	-	-	22	0.1	1	-	8,181	39.5	16	0.1
2009	-	-	129	0.1	-	-	26	0.1	-	-	10,306	49.8	48	0.2
2010	-	-	49	0.2	-	-	15	0.1	-	-	10,235	48.9	15	0.1
2011	-	-	129	0.6	-	-	26	0.1	-	-	9,454	44.1	55	0.3
2012	-	-	51	0.3	-	-	8	-	-	-	8,720	43.0	61	0.3
2013	-	-	2,725	13.3	-	-	19	0.1	-	-	5,488	26.8	67	0.3
2014	-	-	3,100	15.0	-	-	14	0.1	-	-	6,710	32.5	81	0.4

Source : H399 Notified

Table 5.1.17 : RDHS Distribution of Immunization Coverage, 2014

Province	RDHS	Percentage of Immunization Coverage							
		BCG	PVV1	PVV3	OPV1	OPV3	LIVE JE	MMR 1	MMR 2
Western	Colombo	88.0	94.0	93.2	94.0	93.2	99.8	100.0	96.3
	Gampaha	102.0	95.6	96.9	95.6	96.9	100.0	100.0	98.2
	Kalutara	101.7	95.3	98.4	95.3	98.4	100.0	100.0	97.0
Central	Kandy	72.7	100.0	99.8	100.0	99.8	100.0	98.6	94.7
	Matale	100.3	97.7	98.5	97.7	98.5	98.9	100.0	99.4
	Nuwara Eliya	87.0	93.2	98.0	93.2	98.0	100.0	100.0	97.6
Southern	Galle	95.8	99.1	98.4	99.1	98.4	100.0	99.5	99.9
	Matara	96.5	100.0	98.4	100.0	98.4	100.0	99.8	99.7
	Hambantota	65.3	99.8	99.5	99.8	99.5	97.9	99.0	95.9
Northern	Jaffna	100.8	94.4	96.2	94.4	96.2	100.0	100.0	96.2
	Kilinochchi	91.4	100.0	92.1	78.2	92.1	99.3	100.0	105.3
	Mannar	124.1	90.5	92.0	90.5	92.0	99.5	100.0	93.5
	Vavuniya	94.0	95.4	93.3	89.2	93.3	99.1	100.0	93.5
	Mullaitivu	105.7	100.0	99.2	88.2	99.2	100.0	100.0	100.2
Eastern	Batticaloa	101.2	95.3	96.5	95.3	96.5	98.8	100.0	98.3
	Ampara	104.3	96.2	96.4	96.2	96.4	99.7	100.0	102.4
	Trincomalee	95.4	100.0	99.3	100.0	99.3	99.0	96.3	99.7
	Kalmunai	98.4	98.4	98.2	98.4	98.2	100.0	100.0	99.9
North Western	Kurunegala	71.3	97.9	98.1	97.9	98.1	100.0	100.0	98.4
	Puttalam	103.1	95.4	98.4	95.4	98.4	100.0	100.0	98.4
North Central	Anuradhapura	86.4	96.4	98.9	96.4	98.9	100.0	100.0	100.0
	Polonnaruwa	99.7	95.9	98.6	95.9	98.6	99.5	100.0	102.6
Uva	Badulla	97.2	99.2	99.6	99.2	99.6	100.0	98.9	98.4
	Monaragala	99.6	96.7	100.0	96.7	100.0	100.0	99.8	93.8
Sabaragamuwa	Ratnapura	95.8	98.5	99.6	98.5	99.6	100.0	100.0	98.8
	Kegalle	95.0	97.5	99.3	97.5	99.3	100.0	100.0	99.3
Sri Lanka		91.0	97.9	99.1	97.9	99.1	99.0	100.0	95.5

Note - For the calculation of BCG coverage actual births in 2014 is taken as the denominator.
In Sri Lanka registration of births occurs by place of occurrence and not by place of residence. Hence an estimateted births in each district were taken as the denominator for other vaccines.
The estimation was done using a method taking in to account the highest number of immunizations performed and the actual births that took place in each district in year 2014.

The reasons for over 100% coverage in some district are due to vaccination of previous birth cohorts during the year under review.

PVV - Pentavalant Vaccine
MMR - Measles, Mumps and Rubella Vaccine
LJE - Live Japanese Encephalitis Vaccine
OPV - Oral Polio Vaccine
DT - Diptheria and Tetanus

Table 5.1.18 : Number of Selected Adverse Events by Vaccination in 2014

Selected Adverse Events	BCG	OPV	PVV	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI reported
Total number of AEFI reported	29	3	3,339	1,925	478	597	335	74	142	6,922
AEFI reporting rate/100,000 doses administered	8.8	0.2	321.8	552.9	68.0	110.5	98.0	24.0	47.9	
High Fever (>39^{o}C)	4		1326	781	110	124	78	5	6	2,434
Reporting rate/100,000 doses administered	1.2		127.8	224.3	15.7	23.0	22.8	1.6	2.0	
Allergic reactions			306	270	231	328	77	30	33	1,275
Reporting rate/100,000 doses administered			29.5	77.5	32.9	60.7	22.5	9.7	11.1	
Severe local reactions	1		165	90	12	40	21	4	2	335
Reporting rate/100,000 doses administered	0.3		15.9	25.8	1.7	7.4	6.1	1.3	0.7	
Seizure (Febrile/Afebrile)			67	120	10	27	3		1	228
Reporting rate/100,000 doses administered			6.5	34.5	1.4	5.0	0.9		0.3	
Nodules	1		662	244	11	9	35	3	3	960
Reporting rate/100,000 doses administered	0.3		63.8	70.1	1.6	1.7	10.2	1.0	1.0	
Injection site abscess	14		309	59	7	1	15	3	3	411
Reporting rate/100,000 doses administered	4.3		29.8	16.9	1.0	0.2	4.4	1.0	1.0	
Hypotonic Hyporesponsive Episode			7	2	2				1	4
Reporting rate/100,000 doses administered			0.7	0.6	0.3				0.3	

Table 5.1.19 : Sentinal Site Surveillance of Influenza Like Illness (ILI) and Severe Acute Respiratory Illness (SARI), 2014

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 OPD Visits (%)	Total SARI Samples Tested	Influenza Yield from SARI Samples (%)
January	6,925	1.64	124	2.42	277	2.80	53	15.09
February	4,187	1.18	61	18.03	402	5.21	13	15.38
March	960	0.77	183	14.75	126	2.98	34	5.88
April	690	0.58	58	13.79	95	4.08	19	42.11
May	3,245	1.67	63	23.81	387	4.09	33	12.12
June	2,901	1.38	66	13.64	293	4.69	35	5.71
July	3,950	1.23	62	6.45	236	2.27	43	9.30
August	2,757	1.47	41	2.44	120	2.51	19	-
September	2,209	1.16	100	5.00	40	1.23	19	-
October	2,276	1.04	88	13.64	75	1.96	13	23.08
November	12,229	0.98	94	28.72	32	1.50	6	50.00
December	1,700	0.99	65	50.77	21	2.44	5	-
Total	33,029	14.09	1,005	15.42	2,104	35.76	292	12.33

ILI = Influenza Like Illness

SARI = Severe Acute Respiratory Infection

5.1.4 National Dengue Control Unit

5.1.4.1 Introduction

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

5.1.4.2 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.

5.1.4.3 The Vision

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

5.1.4.4 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.

5.1.4.5 Goal

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

5.1.4.6 General Objective

To reduce morbidity and mortality due to dengue fever (DF) and dengue haemorrhagic fever (DHF) by 50% of that in 2014, by 2020.

5.1.4.7 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

5.1.4.8 Epidemiological Surveillance

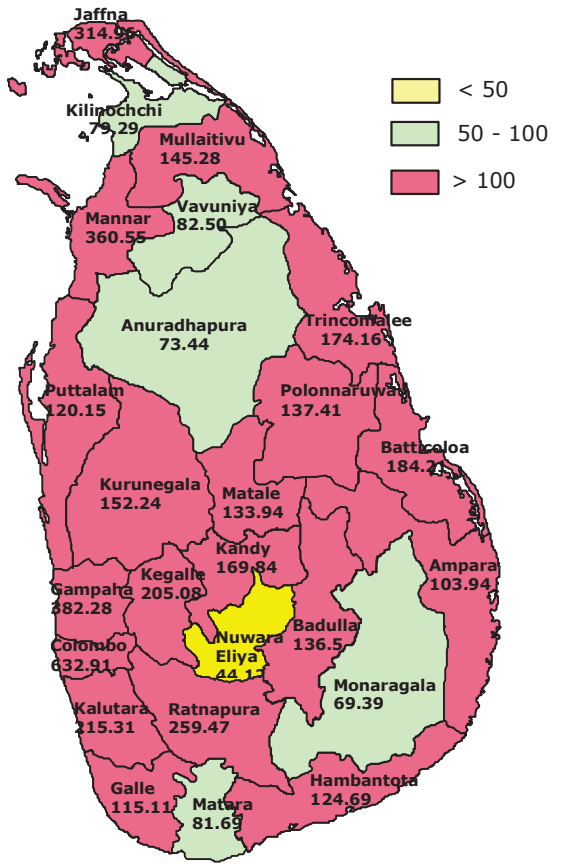
Epidemiological (disease) surveillance is carried out through the Epidemiology Unit. In 2014 a total of 47,502 dengue cases were reported from the entire country as the recorded highest in history. This corresponds to a incidence of 233 per 100,000 population. There were 19 districts reporting more than 100 cases per 100,000 population indicating increasing geographic distribution during 2014 (Fig 5.1.13). Although the number of cases was 47,502 in 2014 , the number of deaths were 97 with a case fatality rate of 0.20% which was a marked reduction compared to previous years (Table 5.1.20). A web based surveillance in collaboration with the Epidemiology Unit was further enhanced in 2014.

Table 5.1.20 : Case Fatality Rate, 2009 - 2014

Year	Dengue Cases Reported	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
2013	32,063	89	0.27
2014	47,502	97	0.20

Source : Epidemiology Unit

Fig 5.1.14 : Reported Dengue Incidence by District, 2014 (Cases per 100,000 population)



(Source : Epidemiology Unit)

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 (Fig 5.1.14). 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.

5.1.4.9 Integrated Vector Management (IVM)

5.1.4.9.1 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. Vector indices are calculated (Breteau Index, Premise Index and Container Index) for assessment of risk and impact of control activities.

In 2014 a total of 305,545 premises were inspected, where *Aedes* larvae were found positive in 24,225 (7.9%) containers. The types of containers are illustrated in Fig 5.1.15.

Fig 5.1.15 : Seasonal Distribution of Dengue

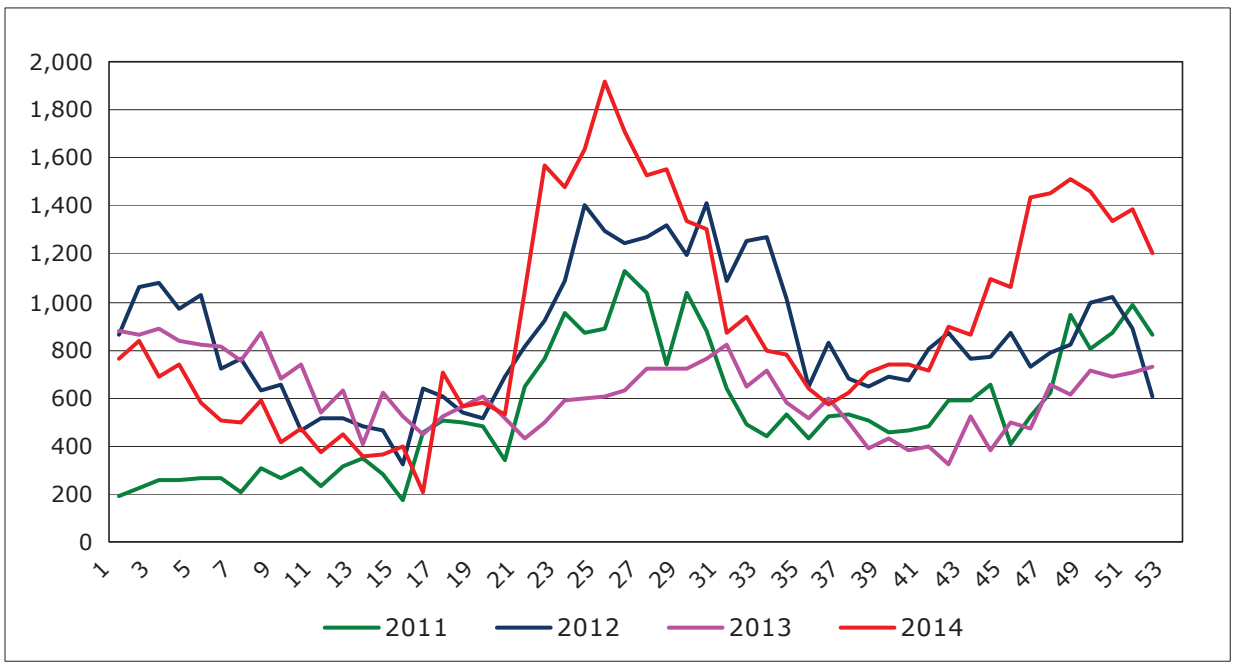
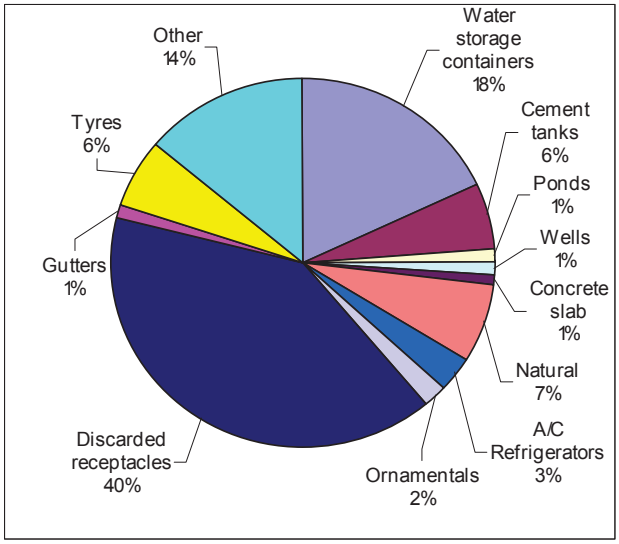


Fig 5.1.16 : Breakdown of Positive Containers (by type) Entomological Surveillance in 2014



5.1.4.9.2 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.

Facilitating district and divisional level vector management staff to perform optimally to control dengue vectors by providing training, equipment, chemicals, technical guidance and other resources. 25 Hand held fogging machines (based on requirement among all RDHS divisions), 602 sets of personal protective equipment to vector control personel which included pair of boots, goggles, gloves, ear plugs, respirator masks and helmets and 123 ladders and 170 observation mirrors.

5.1.4.9.3 Case Management during 2014

During 2014, 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. Case management further enhanced by establishing 24 new High Dependency Units (HDU) in selected hospitals. In addition equipments for existing HDU's were also provided during 2014, which includes microhaematocrit cenrifuges (266 distributed to selected hospitals among 11 districts), 14 colour doppler portable US machines. (NHSL, Teaching Hospitals - 1 , Provincial General Hospitals - 2, District General Hospitals - 8, Base Hospitals - 2)

Table 5.1.21 : HD Units of Health Institutions Provided with Equipments in 2014

Type of Hospital	No. of HDU's facilitated in 2014
Teaching Hospitals	10
Provincial General Hospitals	3
District General Hospitals	13
'A' Grade Base Hospitals	9
'B' Grade Base Hospitals	12
Total	47

5.1.4.10 Major Activities Carried Out in 2014

- Two well-co-ordinated National Mosquito Control Programmes were carried out during 2014 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. (Table 5.1.22)

  √ 1st Mosquito Control Week from 02nd to 08th, April
  √ 2nd Mosquito Control Week from 10th to 16th, September

- 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.

Table 5.1.22 : Summary of National Mosquito Control Weeks (NMCW), 2014

Program	No. of premises inspected	Potential breeding places	% of Potential breeding premises	Larvae found	% of Larvae	No. of notices issued	Legal Actions
NMCW 1	182,313	50,965	27.95	3,773	2.07	5,596	740
NMCW 2	348,001	94,841	27.25	13,615	3.91	15,410	3,500
Total	530,314	145,806	27.49	17,388	3.28	21,006	4,240

- 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.

5.1.4.11 Outbreak Response: Emergency Dengue Conrol Pogramme in Western Province

- Weekly reporting of data revealed that highest number was reported in 25th week (1,915 cases) of which more than 60% were from the Western Province (WP). In order to curtail this outbreak situation promptly, an emergency dengue control programme was conducted in WP as per the decision taken at the Presidential Task Force on Dengue Prevention (PTFD) meeting held on 9th June, 2014.
- A series of mass scale premises inspection programmes were carried out targeting houses, schools, institutions, public and religious places and bare lands, etc. A Civil-Military Cooperation (CIMIC) activity involving approximately 50,000 personnel from tri forces, civil defence force, police and health services was conducted over 7 months.
- This emergency dengue control programme was targeted mainly at the GN divisions in selected high risk Medical Officer of Health (MOH) areas based on epidemiological data in the districts of Colombo, Gampaha and Kalutara (including Colombo MC and NIHS Kalutara). This activity was primarily aimed at detection of mosquito breeding sites and their elimination through source reduction on site augmented by health education, other vector control methods such as larviciding and fogging when needed and enforcing legal action when necessary.

Table 5.1.23 : Summary of Emergency Dengue Control Programs in 2014

Phase	Date(s) - 2014	Premises visited	Premises with larvae	Larvae %	Notices	Legal actions
Phase I	20-22 June	105,899	2,745	2.6	2,679	558
Phase II	3-5 July, 7-9 July, 18 July	386,125	4,225	1.68	6,210	1,365
Phase III	24-26 July	122,159	1,520	1.24	3,247	766
Phase IV	7-9 August	82,542	1,451	1.76	2,742	795
Phase V	18-19 August	54,447	1,148	2.11	3,369	611
Phase VI	07-09 Sept	7,707	1,138	14.77	1,381	399
Phase VII	17-18 Oct	44,225	812	1.84	1,433	482
Phase VIII	31 Oct, 01 Nov	49,591	1,246	2.51	1,448	692
Phase IX	13-14 Nov	51,239	1,246	2.43	1,248	518
Phase X	18-20 Dec	54,337	1,366	2.51	1,623	526
Total		958,271	16,897	1.76	25,380	6,712

5.1.5 Nutrition Division

Nutrition Division is responsible for overall management of nutrition services 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 into action at grass root level. In addition this unit carries out in-service training programmes, awareness sessions and other 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.

5.1.5.1 Vision

A nation with optimum nutritional well being, together with an optimum health status for Sri Lankans of all age groups.

5.1.5.2 Mission

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

5.1.5.3 General Objective

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

5.1.5.4 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.

5.1.5.5 Activities Carried Out in 2014

Nutrition Division carried out the following activities for the year 2014.

1) Awareness of Food Manufactures

A seminar was conducted towards, "Improved Food Industry" for various private food manufactures and unhealthy effects of excess sugar, fat and salt were discussed. A constructive link was established between private food producers and Nutrition Division, Ministry of Health with a view of improving quality & standards of commercially prepared food products.

2) Food Fortification

Policy directions were prepared for food fortification in Sri Lanka. Land escape analysis and pilot program on fortification will be carried out in near future. Iron, forlic acid, vitamin A and zinc are the fortificants and rice/wheat flour will be the vehicles.

3) Banners

Banners were prepared and modified for measuring nutritional status (BMI), food colour code and food plate for identifying healthy natural food versus processed food with high sugar, salt and fat.

4) Disease Based Dietary Guideline

A document introducing guidelines for nutrition therapy and specific diet for people with diseases was launched. A total of 4,000 copies were printed and distributed.

5) Graphic Symbol

A demonstrable food plate was designed to Sri Lanka through a consultative meeting by Nutrition Division, Ministry of Health. Banners, posters and education materials were prepared based on this.

6)Providing Infrastructure Facilities for Nutrition Promotion Clinics

Weighing and height scales, tables, chairs and televisions were distributed for selected 07 nutrition clinics.

7)Dietary Guideline for Buddhist Clergy and Dayaka Dayika

Two booklets of Dietary Guideline for Buddhist clergy and dayaka dayika were launched and handed over 20,000 copies for distribution.

8) Volunteer Guideline for Community Health Workers

Volunteer Guideline for community health workers was launched and printed copies were distributed among the community health workers.

5.1.6 Nutrition Coordination Division

5.1.6.1 Introduction

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 Non Governmental Organizations.

5.1.6.2 Vision

To improve the nutritional status of the population with special reference to children and women.

5.1.6.3 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".

5.1.6.4 Activities Implemented during 2014

5.1.6.4.1 Coordinating the National Supplementary Feeding Programme (Thriposha Programme)

This is the national nutrition supplementary feeding programme funded by Ministry of Health since 1973.

The objectives of the Thriposha programme :

- 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
- Improve the socio-economic status of the local farmers

Beneficiaries are :

- All pregnant mothers throughout the pregnancy & lactating mothers up to 6 months
- Children from 6 months to 5 years of age who are below -2SD of the growth reference curve and growth faltering.

Management of the Programme :

The management of national supplementary feeding programme (Thriposha) has now been transferred to Sri Lanka Thriposha Limited, a fully government owned company under the Ministry of Health. Following the management change,Thriposha production has been increased up to 60,000 master bags per month from previous 35,000 – 40,000 master bags per month. Percentage of Thriposha beneficiaries also reached 85% from 68% during this time. Although 1.3mn are identified as beneficiaries, at present we are able to cover only 950,000 beneficiaries. It is planned to install new machines to increase the production.

5.1.6.4.2 District Nutrition Action Plan (DNAP)

According to the National Nutrition Policy and Strategic Plan, guidelines were prepared for developing the District Nutrition Action Plans. Rs. 10.0 mn funds were released to Provincial Directors of Health Services (PDHS) for the implementation of the Nutrition Action Plan in all districts. Guidelines for developing the District Nutrition Action Plan were printed and launched at the inauguration ceremony of the National Nutrition Month at Anamaduwa. District Nutrition Plans for 2015 has been developed according to the guidelines of DNAP.

5.1.6.4.3 National Nutrition Council

Multi-sector Action Plan was prepared by National Nutrition Secretariat with the participation of 17 ministries in the Nutrition council. In this endeavour Ministry of Health had played a key role. Pilot programmes conducted in Nuwara Eliya & Monaragala by Nutrition Coordination Division with the UNICEF assistance were taken as a baseline/ guide to prepare Multi-sector Action Plan with the theme of "Nourished Nation by 2016".

Based on the Action Plan, Nutrition Coordination Division, Ministry of Health initiated the implementation of activities.

5.1.6.4.4 National Nutrition Month

- Nutrition Coordination Division is the focal point to conduct the National Nutrition Month activities.
- Theme of the Nutrition Month - 2014 was based on "Iron Rich Food for Health, Strength and Intelligence". This time the inauguration ceremony was held on 2nd June, 2014 at Anamaduwa in Puttalam district with the coordination of the National Nutrition Secretariat of the President's Secretariat. It was able to conduct number of programmes through the electronic and print media to create awareness among people on prevention and control of anaemia.

Main Objectives of the National Nutrition Month - 2014

- To reduce iron deficiency anaemia status of every age group of the community
- To create awareness on the importance of iron rich food and to motivate the community to increase iron intake
- To improve knowledge attitudes and practices on nutrition in community through island wide nutrition programmes giving priority to vulnerable populations
- To identify responsibilities and duties of non-health sector in reducing iron deficiency anaemia status and conduct advocacy programmes to relevant officials

Activities Implemented during the Nutrition Month - 2014

- Created awareness with regard to the influence of nutrition to overcome the iron deficiency anaemia status.
  - √ Created public awareness on reducing iron deficiency anaemia through practical sessions and demonstrations.
  - √ Conducted mobile clinics focusing on reducing iron deficiency anaemia.
- Children under 5 years who are under the care of PHMM, were examined clinically for anaemia at Well Baby Clinics and positive children were referred to hospitals for further investigations and management.
- In order to implement interventions to improve the nutritional status of children under 5 years, updated IYCF programmes through PHMM in MOH Offices.
- Identified anaemia status among pre-schoolers & school children and planned interventions to overcome it.
- Promoted and strengthened weekly iron supplementation programme for school children from grade 1 to 13.
- Identified the schools where there are issues in implementing the weekly iron supplementation programme & implemented remedial action.
- Assessed the nutritional status of the out of school adolescents and implemented suitable interventions including weekly iron supplementation.
- Identified pregnant mothers with anaemia and implemented special programmes for them.
- Updated the knowledge of health staff on nutrition related matters at nutritional level using educational & communication methodologies.
- Implemented special programmes to reduce anaemia among estate population.
- Educated health professionals & staff of the health education units in hospitals on modalities to minimize iron deficiency anaemia through dietary methods.
  - Promoted to cultivate iron rich food at household level & clinic based.
- Conducted food demonstration programmes at grass root level with community participation.
- Conveyed nutrition messages through child health clubs & community based organizations.

5.1.6.4.5 Preschool Teacher Training Programme

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 the preschool children.

- Nutrition Coordination Division conducted the Preschool Teacher Training Programme on nutrition at Rideemaliyadda and Lunugala in Badulla district and Hanguranketha in Nuwara Eliya district.

5.1.6.4.6 Nutrition Awareness and Food Demonstration Programme

Food Demonstration Programme is one of the skill development nutrition programmes coming under the National Nutrition Programme.

Prevention and treatment of stunting and wasting remains a challenge. There are no proper supplementary nutritional products available in the market to feed children in a correct way. Hence it is expected to provide knowledge and skills on nutrition to women by presenting new recipies using local products.

This programme has been implemented in the following areas:

Year 2014	–	Rideemaliyadde	- 1
		Thanamalwila	- 1
		Meegahakiula	- 1
		Lunugala	- 1
		Bibila	-1

Total Beneficiaries:

MOH staff	-	240
Mothers/volunteers	-	380
Total	**-**	**620**

This programme was sponsored by World Vision Lanka.

5.1.6.4.7 Establishment of National Nutrition Surveillance System (NNSS)

Initially, National Nutrition Surveillance System was successfully established in 30 DS divisions representing 19 districts and operated by the planning unit of the DS division. Now it has been expanded to all 5 DS divisions in Nuwara Eliya district.

- Routinely collected data is uploaded to the database under the direct supervision of the Nutrition Coordination Division. Policy makers and programme managers as well as general users can access to NNSS database through our website ***www.nutrition.lk.***
- This system was revamped by using latest software.

5.1.6.4.8 Coordination & Collaboration with Other Agencies

- Function as Ministry of Health focal point for Nutrition Secretariat at President's Secretariat
- Nutrition Coordination Division is the Secretariat to the Nutrition Steering Committee, which is chaired by the Secretary, Ministry of Health.
- Take part in awareness exhibitions & campaigns on nutrition.
- Provide Technical support to other Ministries 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 Post Graduate Institute of Medicine & National Institute of Education, universities, Nurses Training Schools, Ayurvedic Dept., etc.
- Working with UN agencies such as UNICEF, WHO, WFP, World Vision Lanka, Child Fund, Sarvodaya, etc.

5.1.7 Quarantine Unit

The main responsibility of this unit is to protect Sri Lanka by the prevention of the spread of certain diseases into the country and to protect, prevent and control of international spread of diseases and other public health risks specially the **Public Health Emergency of International Concern (PHEIC)** by avoiding unnecessary interference with international traffic and trade. The main concerns are the implementation of Quarantine and Prevention of Diseases Ordinance of 1897, and International Health Regulations (IHR- 2005).

5.1.7.1 Responsibilities

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. Activities related to implementation of IHR in Sri Lanka are being carried out by both the units in collaboration with each other. Sri Lanka is also legally bound to comply and obliged to implement the IHR 2005 with the other member states in accordance with the purpose and scope to protect, prevent and control of international spread of diseases as well as public health risks, specially Public Health Emergency of International Concern (PHEIC) by avoiding unnecessary interference with international traffic and trade.

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 to prevent and control the spread of diseases into Sri Lanka. They are 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 Units Carrying 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
- Port Health Office at Rajapaksha International Port-Hambantota
- Airport Health Office, Mattala
- Port Health Office at Trincomalee

An action plan was prepared for 2014 to achieve the following main objectives:

√ Mapping legal framework current legal frameworks, routine practices, procedures, duties and systems in place for border health management (Quarantine Act and Immigration Act). Mapping literature and global best practices in border health relevant to Sri Lankan context to review and present a cabinet memorandum to harmonize new and emerging public health issues with present system.

√ Establish a 'Legislative Review Committee' – legal officers representing the relevant ministries/stakeholders to discuss the amendments needed to link IHR with the domestic legal framework

√ Develop Standard Operational Procedure (SOPs) to strengthen the border health practices

√ Enhance the capacity of quarantine/border health officers through in-service training programs

√ Develop health surveillance system and notification and information system at points of entry linking to central level by developing database at each quarantine stations which will be sent to the central level via e-mail at the beginning

5.1.7.3 Progress of Core Capacity Development under Implementation of IHR 2005 at Points of Entries (POE)

Current practicing legal frameworks, routine practices, procedures, duties and systems in place for quarantine/border health management (Quarantine Act and Immigration Act) has been revised in this year.

Standard Operational Procedure (SOPs) and Border Health Information System (BHIS) for Points of Entries (POE) were introduced. Pilot project has already been started in Airport Health Office, BIA Katunayake, Port Health Office at Galle, Port Health Office and Colombo Harbor. This system will be introduced in to the other POEs after evaluation of this pilot project.

Cabinet paper has been drafted to harmonize the Quarantine and Prevention of Diseases Ordinance of 1897, with International Health Regulations (IHR-2005).

Introduction of "Malaria Screening" for people arriving from malaria endemic countries was started at 24 hour functioning health desk in Airport Health Office, BIA Katunayake.

The main duties of this office currently include prevention of listed infectious diseases being introduced into the island, issuing of pratique to aircraft/ships, inspection and release of food items imported, release of human remains, general airport/port sanitation, maintenance of high standard of all the food outlets and other public health activities.

5.1.7.4 Activities of Quarantine Services

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 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.

Deratting certificate and deratting exemption certificate have been replaced by ship sanitation control exemption certificate and ship sanitation control certificate.

5.1.7.4.4 Vector Control

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

5.1.7.4.5 Food and Water Sanitation at POE

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.

5.1.7.4.6 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.

5.1.7.5 Activities Carried out by Each Unit during 2014

Table 5.1.24 : Activities Carried out by the Airport Health Officer-BIA Katunayake

Activities		Number
1. Yellow Fever Surveillance		
1.1 No. with valid certificate		595
1.2 No. without valid certificate & deported		-
2. Disinfections of Aircrafts		
2.1 No. of flights arrived		25,400
2.2 No. of flights has to be disinfected		28,078
2.3 No. of flights disinfected		19,446
3. Passenger Arrivals & Departures		
3.1 No. of passengers arrived		3,795,187
3.2 No. of passengers departure		
4. Release of Human Remains		
4.1 No. of human remains released		465
4.2 No. released to J.M.O. for postmortem		23
4.3 No. of alleged suicide		19
4.4 Surveillance of other infectious diseases		Ebola screening 986
5. Airport Sanitation		
5.1 No. of sanitary inspections carried out including food establishment		82
5.2 No. of food samples taken under food act		3
5.3 No. found defectives	prosecuted	0
	warned	0
6. Other Activities		
6.1 Polio vaccines, no. of doses given		0
6.2 Health talks given to staff		61
6.3 No. of water samples take for bacteriology analysis		22

Table 5.1.25 : Activities Carried out by the Airport Health Officer - Mattala MRIA

Activities		Number
1. Yellow Fever Surveillance		
1.1 No. with valid certificate		
1.2 No. without valid certificate & deported		
2. Disinfections of Aircrafts		
2.1 No. of flight arrived		854 (Domestic 409)
2.2 No. of flights has to be disinfected		
2.3 No. of flights disinfected		
3. Passenger Arrivals & Departures		
3.1 No. of passengers arrived		Foreign 3,557 Domestic 12,354
3.2 No. of passengers departure		
4. Release of Human Remains		
4.1 No. of human remains released		
4.2 No. released to J.M.O. for postmortem		
4.3 No. of alleged suicide		
4.4 Surveillance of other infectious		
5. Airport Sanitation		
5.1 No. of sanitary inspections carried out including food establishment		31
5.2 No. of food samples taken under food act		F/B07 IF/B02
5.3 No. found	prosecuted	
	warned	
6. Other Activities		
6.1 Polio vaccines, no. of doses given		
6.2 Health talks given to staff		178
6.3 No. of water samples take for bacteriology analysis		11

Table 5.1.26 : Summary of the Activities Carried out by the Port Health Officer - Colombo Harbor

Indicator	Number
No. of ship arrival/pratique granted	4,136
No. of yellow fever vaccines given	46
No. of deratting exemptions certificates issued	244
No. of human remains released	3
No. of under graduates trained	-

Table 5.1.27 : Summary of the Activities Carried out by the Port Health Officer - Galle Harbor

Indicator	Number
No. of ship arrival/pratique granted	158
No. of yellow fever vaccines given	124
No. of deratting exemption certificates issued	10
No. of human remains released	3
No. of under graduates trained	118

Table 5.1.28 : Summary of the Activities Carried out by the Port Health Officer - Hambantota Rajapaksha International Harbor

Indicator	Number
No. of ship arrival/pratique granted	270
No. of yellow fever vaccines given	-
No. of deratting exemption certificates issued	-
No. of human remains released	-
No. of under graduates trained	-

Table 5.1.29 : Summary of the Activities Carried out by the Port Health Officer - Tricomalee Harbor

Indicator	Number
No. of ship arrival/pratique granted	127
No. of yellow fever vaccines given	13
No. of deratting exemption certificates issued	12
No. of human remains released	-
No. of under graduates trained	-

Table 5.1.30 : Summary of the Activities Carried out by the Asst. Port Health Officer - MRI, Colombo

Indicator	Number of Doses
Total no. of yellow fever vaccination	4,055
Total no. of meningococcal meningitis vaccination	6,030
Total no. of oral polio vaccination (Booster)	551

Limited isolation facilities were established at main international airport and seaport.

5.1.8 National Blood Transfusion Service

National Blood Transfusion Service (NBTS), Sri Lanka is a fully government owned special campaign coming under the Ministry of Health. It is the sole supplier of blood and blood products to all government hospitals and majority of private sector hospitals. There are 90 hospital based blood banks & 2 standalone blood centres affiliated to 17 cluster centres, depending on the geographic distribution. (New cluster centre established in 2014 – Chilaw)

The Director NBTS being the chief executive officer of the organization, who is responsible for implementation and supervision of the common decisions taken by the organization.

The majority of NBTS staff are affiliated with the 17 cluster centres across the country. Each cluster centre is headed by Consultant Transfusion Physician or a senior medical officer. Each centre also has a Consultant Transfusion Physician who gives clinical guidance.

This report compiles the consolidated statistics of the performance of the blood banks of the National Blood Transfusion Services for the year 2014.

5.1.8.1 Vision

To be unique model for the world securing quality assured blood service, through a nationally coordinated system.

5.1.8.2 Mission

To ensure the quality, safety, adequacy and cost effectiveness of the blood supply and related laboratory, clinical, academic and research in accordance with national requirement and WHO recommendations.

5.1.8.3 Major Achievements in 2014

1. NBTS Sri Lanka was selected to host the World Blood Donor Day global event 2014 by World Health Organization. The event was celebrated in grand scale on 14th June, 2014 at BMICH under the patronage of Hon. Minster of Health and by the participation of local and international distinguished guests.
2. NBTS was able to maintain 100% collection of the blood from voluntary blood donations during the year 2014.

Table 5.1.31 : Blood Bank Distribution, 2014

Province	Cluster centre	Blood banks
Western	NBC	NHSL
		CSHW
		CSTH
		DMH
		LRH
		SJGH
		Accident ser.
		IDH-Angoda
		CETH-Mulleriyawa
	Chilaw	Marawila
		Negambo
		Puttalam
		Kalpitiya
	CNTH	Gampaha
		Wathupitiwala
		Welisara
	Kalutara	Horana
		Kethumathi
		Panadura
	CIM	Awissawella
		Homagama
		Karawanella
Central	Kandy	Dambulla
		Dickoya
		Gampola
		Kegalle
		Matale
		Mawanella
		Nawalapitiya
		Nuwara Eliya
		Peradeniya
		Rikillagaskada
		Warakapola
Southern	Karapitiya	Balapitiya
		Elpitiya
		Mahamodara
		Udugama
	Kamburugamuwa	Hambantota
		Kamburupitiya
		Matara
		Tangalle
		Tissamaharama
		Walasmulla
Northern	Jaffna	Killinochchi
		Mullaitivu
		Point Pedro
		Thelippalai
	Vavunia	Mannar
		Cheddikulam
Eastern	Batticaloa	Valachchenai
	Trincomalee	Kantale
		Kinniya
		Muthur
	Ampara	Akkaraipattu
		Dehiattakandiya
		K'munai N
		K'munai S
		Mahaoya
		Samanthurai
North Central	Anuradhapura	Medirigiriya
		Padaviya
		Polonnaruwa
		Thambuttegama
North Western	Kurunegala	Dambadeniya
		Kuliyapitiya
		Nikaweratiya
Uva	Badulla	Bibila
		Diyathalawa
		Mahiyanganaya
		Monaragala
		Welimada
		Wellawaya
Sabaragamuwa	Rathnapura	Balangoda
		Embilipitiya
		Kahawatta

Note:

- Kalpitiya and Cheddikulam are currently not functioning
- Walasmulla started from April, 2014 and Udugama started from June, 2014

Table 5.1.32 : Blood Collection and Component Preparation

Total Blood Collection	380,367
Component Preparation	
Platelets	220,335
Fresh Frozen Plasma (FFP)	344,091
Cryoprecipitate (Cryo)	81,824

Table 5.1.33 : Comparison of Annual Blood Collection

Year	Voluntary collection	Replacement collection	Total collection
2010	268,128	34,755	302,883
2011	318,885	11,315	330,200
2012	349,423	2,182	351,605
2013	380,808	-	380,808
2014	380,367	-	380,367

Fig 5.1.17 : Annual Blood Collection

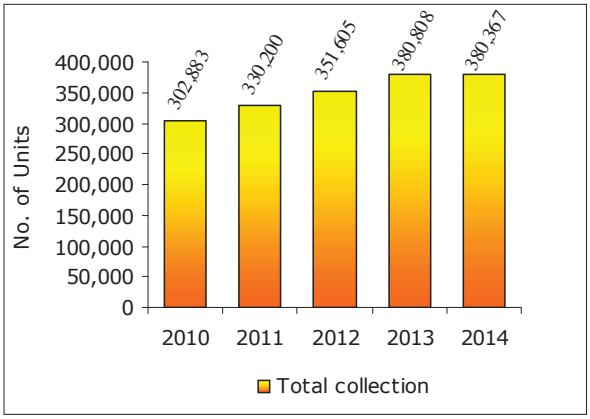


Table 5.1.34 : Component Preparation and Comparison with Previous Years

	2011	2012	2013	2014
RCC	335,746	361,149	380,760	379,774
Platelets	179,315	199,489	189,879	220,335
FFP	294,910	319,869	282,231	344,091
Cryoprecipitate	87,323	101,468	88,810	81,824

Fig 5.1.18 : Comparison of Blood Component Preparation

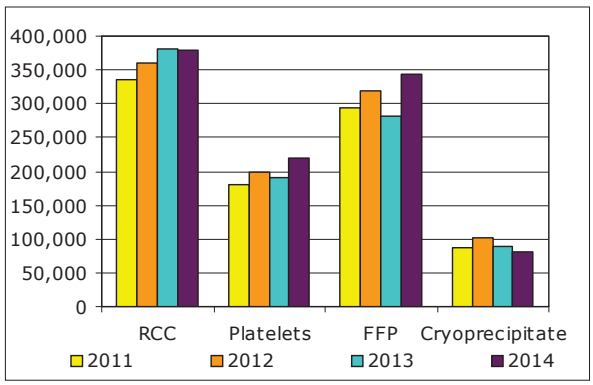


Table 5.1.35 : Performance of Human Leukocyte Antigen (HLA) Laboratary

HLA laboratary of NBTS is the only place in Sri Lanka to do the cross matches for organ transplantation.

Typing and cross matches	2012	2013	2014
Class I	2,195	2,876	2,293
Class II	2,188	2,856	2,297
Cross match	1,526	2,076	1,365
B27	187	194	352
PRA (Class I, Class II)	185	207	179
Transplantation	**2012**	**2013**	**2013**
Kidney (Patients, Donor)	2,096	2,721	2,455
Bone marrow (Patients, Donors)	96	136	192
AP donor	-	14	11
Cadaveric donars	34	22	7

PRA - Panel reactive antibodies

Fig 5.1.19 : Comparison of HLA Laboratory Statistics

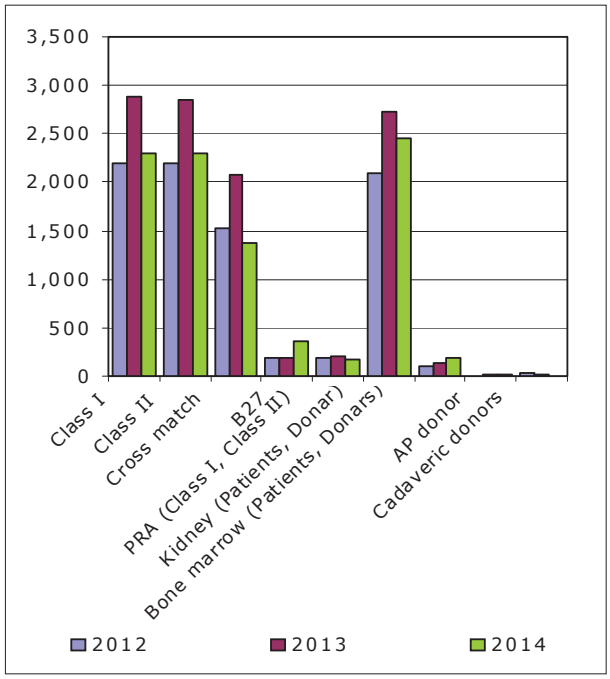


Table 5.1.36 : Performance of Reference Immunohaematalogy Laboratory

Test category	2012	2013	2014
Difficult compatibility testing	3,411	3,263	2,413
Antenatal screening	1,012	1,371	1,640
Antibody titrations	339	398	243
DAT profile	708	790	637
Extended phenotypes	261	237	303
Cold agglutination titration	55	50	38
Iso haemagglutination test	36	43	80
Haemolysin test	36	26	26
Confirmation of Bombay O	22	13	111
Elution studies	25	11	30
Rh genotyping	10,155	9,722	6,331
Transfusion reaction investigations	12	15	14

Fig 5.1.20 : Comparison of Imunohaematalogy Laboratory Statistics

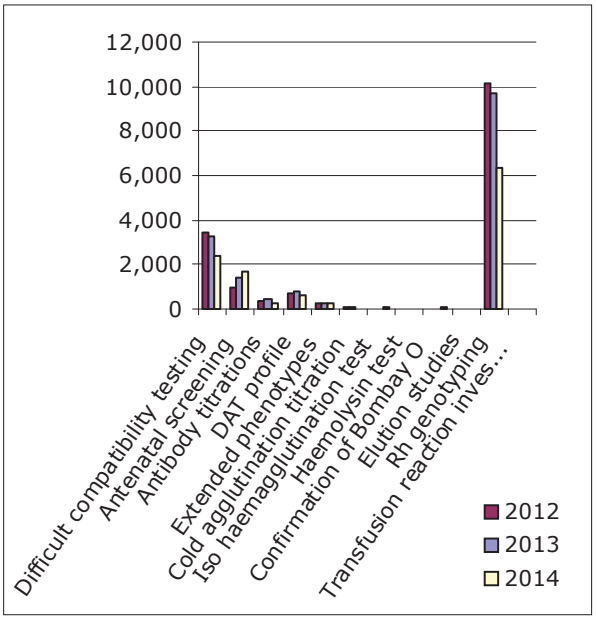
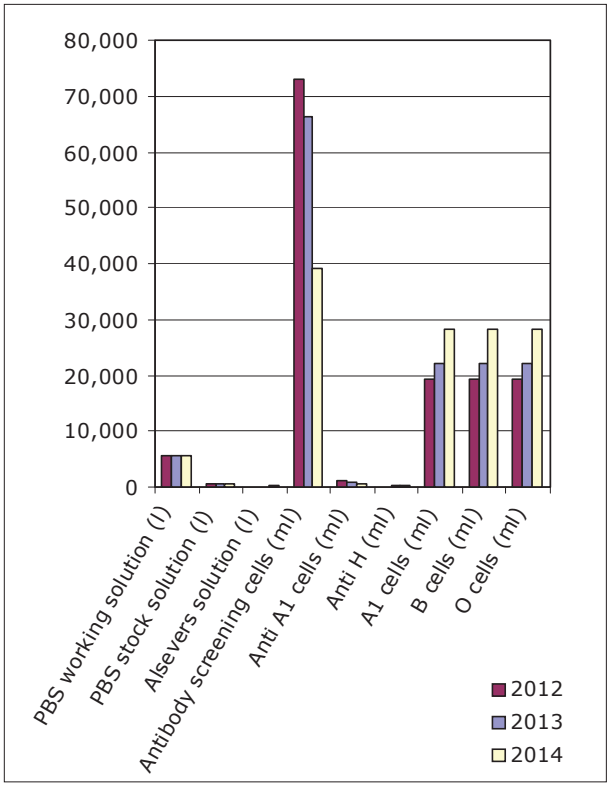


Table 5.1.37 : Performance of Reagent Laboratory

Reagents prepared	2012	2013	2014
PBS working solution (l)	5,510	5,730	5,565
PBS stock solution (l)	520	610	620
Alsevers solution (l)	108	116	148
Antibody screening cells (ml)	73,114	66,390	39,255
Anti A1 cells (ml)	1,030	838	483
Anti H (ml)	80	248	328
A1 cells (ml)	19,280	21,980	28,275
B cells (ml)	19,280	21,980	28,275
O cells (ml)	19,280	21,980	28,275

Fig 5.1.21 : Comparison of Statistics of Reagent Laboratory



5.1.8.4 Statistics of Teaching and Training Unit

Training programs conducted for staff categories of NBTS;

1. Postgraduate training programs
2. Medical officers - 4 weeks programs
3. Nursing officers – 4 weeks and 2 weeks programs
4. Medical laboratory technologists – 8 weeks programs
5. Public health inspectors - 4 weeks Program
6. Pharmacists -1 week
7. Junior staff/lab orderly – 1 week programs
8. Ambulance drivers -3 days

5.1.8.5 Teaching Sessions

1. Medical students (University of Colombo) – 1 week training for each group for 12 groups
2. Medical students (USJP) – 3 days – lecture & demonstration
3. Medical laboratory technologists – students – University of Sri Jayewardenepura (only introduction and bench training)
4. Students from MLT schools - MRI & Peradeniya
5. Foreign trainees (SAATM)

6. One day training programs,
    - Navy officers
    - Pharmacists
    - Post Basic Nursing School
    - NTS students
    - School pupils

5.1.8.6 Awareness Programs

a) All staff categories of NBTS
b) Related clinical staff

Table 5.1.38 : Staff Training

Staff category	2012	2013	2014
Medical officers (4 wks)	74	118	136
Medical officers (2 wks)	4	30	-
Postgraduate trainees	19	23	4
Nursing officers (4 wks)	24	1	29
Nursing officers (2 wks)	25	22	97
MLT (8wks)	10	1	8
Lab orderly (4 wks)	-	1	8
Junior staff/lab orderly (5 days)	43	18	19
Pharmacists	2	-	-

Table 5.1.39 : Teaching Sessions

Group of trainees	2012	2013	2014
Medical Students, Colombo University	178	206	204
PG Students	7	13	9
MLS Students	-	79	85
Intern Pharmacists	23	18	11
Post Basic Nursing Officers	98	122	131
Medical Students - USJP	96	131	150
Medical Assistants - Navy	74	102	115
Public Health Inspectors	-	-	66

5.1.8.7 The Project of NAT Facility at National Blood Centre

Nucleic Acid Testing (NAT) was introduced to the National Blood Centre (NBC) by the State of Art Technology Project funded by the government of the Netherlands.

Nucleic Acid Testing directly amplifies and detects the genetic material (DNA or RNA) of viruses in order to screen for the existence of transfusion transmitted infections in donated blood (Eg:Human Immunodeficiency Virus-HIV, Hepatitis B Virus-HBV and Hepatitis C Virus-HCV).

Table 5.1.40 : Awareness Programmes

Programmes	Representatives	Sponsors	Number
Extra safety in Immuno Haematology	BB MOO & MLTs	Ortho Diagnostics	68
Scientific sessions	Medical Officers	College of TPs.	52
WBDD symposium	Medical Officers	Multiple Organizations	41
WBDD symposium	BB Nursing Officers , MLTs & PHIs	Multiple Organizations	196
WBDD symposium	BB Junior Staff	Multiple Organizations	62
Safe blood transfusion practices	BB Nursing Officers	Health Ministry	40
Extra safety in Immuno Haematology	BB MOs	Health Ministry	32
Blood safety	BB Junior Staff, Badulla	Health Ministry	26
Blood safety	BB Junior Staff	Health Ministry	30
Motivation of blood donors and campaign organizers	BB PHI	Health Ministry	26
Blood safety	BB Junior Staff, Anuradhapura	Health Ministry	30
Appropriate & safe blood transfusion practices	Ward MOs	Health Ministry	30
Donor motivation & safe blood transfusion practices	BB MO CIM cluster	Health Ministry	32
Appropriate & safe blood transfusion practices	Hospital MO, Matara	Health Ministry	41
Blood safety	BB MLT	Health Ministry	29
Safe blood transfusion practices	Ward NOs	Health Ministry	47
Office management	NBC Office Staff	Health Ministry	30
Blood safety	BB Junior Staff, CCB	Health Ministry	30

5.1.8.7.1 Advantages in Implementing NAT in the National Blood Transfusion Service

Even though the cost is high for the infrastructure and consumables, NAT provides the following advantages

- Safeguard the blood safety further more in reducing the window period by early detection of viral infections and before appearance of antibodies.
- Fulfills an international requirement for the provision of plasma products for plasma fractionation plants.

Detects mutant, variant viruses that may not be detected by antibody detection methods.

5.1.8.8 Review Report of Nucleic Acid Testing (NAT) Facility at National Blood Centre (NBC) – up to 1st January, 2015

5.1.8.8.1 Infrastructure Development and Staff Training

- Equipments installations were done in a temporary NAT laboratory in December, 2013.
- Testing was initiated in February, 2014 after training sessions were conducted for four operators.

5.1.8.8.2 Testing Summary

- NAT testing were done for the samples collected in-house or from mobile campaigns conducted by the NBC.
- Following table summarizes the testing done up to 1st January, 2015.

Table 5.1.41 : Summary of Nucleic Acid Testing

Total tests performed	Tested samples
23,000	20,559
19,785	17,489
19,527	17,356
12,427	11,118

Out of the above tested samples, one NAT yield was gained. (NAT yield is taken as serology negative but NAT positive sample)

5.1.8.9 Draw Backs

Encountered problems during the above period;

I. Operator errors
II. Machine failures and hardware errors
III. Improper construction of temporary NAT laboratory - Faulty power supply and high humidity inside lab due to unsuitable doors
IV. Frost formation in the freezer provided by the project
V. High consumable cost for the Type 1 water distiller.

5.1.8.10 Future Plans

Stepwise expansion for provision of testing for all the blood collected island wide.

5.1.8.11 Special Development Activities of 2014

There are two ongoing projects to develop the National Blood Transfusion Service. Namely;

1. Peripheral blood bank development project
2. Upgrading the National Blood Transfusion Services (NBTS) with State of the Art Technology

During the years of 2013 and 2014, a major part of the blood bank development project titled 'Upgrading the National Blood Transfusion Services (NBTS) with State of the Art Technology' has been completed. Two main constructions including new wing to the National Blood Centre (NBC) and Blood Bank building (12,675 sqft) and to National Cancer Institute - Maharagama (12,647 sqft) are being conducted under the project and 65% of the construction has been completed in the new wing to NBC while 90% of construction has been completed in the building of National Cancer Institute.

Under the said project, the work is been in progress to upgrade the NBTS with latest technology including testing of donated blood with NAT facility, establishment of Cord Blood Banking facility, establishment of Stem Cell Harvesting and storing facility, upgrading of Human Leukocyte Antigen (HLA) testing laboratory and establishment of Frozen Red Cell (FRC) facility. Computerization and networking of NBTS is also in progress.

5.1.9 Health Education Bureau

5.1.9.1 Introduction

Health Education Bureau (HEB) is the centre of excellence in Sri Lanka for health education, health promotion and publicity. Empowering and mobilizing communities for the improvement of their quality of life through health promotion principles is the main achievement gained over the period.

The vision of the HEB is to promote and foster a healthier nation which contributes to economic and social productivity. The mission is to promote the health of the people through intersectoral advocacy for health education, promotion and evidence based communication interventions through a decentralized system.

As a whole, HEB has been successful and received recognition for its remarkable contribution for health promotion through integrated multidisciplinary approach.

5.1.9.2 Strategic Objectives

HEB conducts activities under main five strategic objectives,

1. Developing policies, plans and technical guidelines pertaining to health promotion, advocacy and communication
2. Communication for public awareness and behavioral changes leading to health promotion
3. Development of health education promotion, advocacy and communication materials
4. Capacity building of health care staff and other personals involved or interested in health promotion
5. Monitoring & evaluation of health promotion programs

Furthermore HEB also actively involves in conducting and supporting preventive, control and health promotion activities offered by other units in the health and health related sectors. HEB also shares its expertise by providing technical consultations for advisory committees, workshops, research and surveys on request to other public organizations.

5.1.9.3 Major Achievements in 2014

5.1.9.3.1 Strategic Objective No. 1 : Developing policies, plans and technical guidelines pertaining to health promotion, advocacy and communication

Policies, plans and technical guidelines pertaining to health promotion developed by HEB provide common objectives to be achieved by different sectors and technical guidelines in order to assure the standards of health promotion activities.

Following are the major achievements for 2014.

- Developing draft National Health Promotion Policy
- Development of medium term strategic plan and guidelines for health promotional settings
- Developing communication strategy on nutrition
- Developing communication strategy on Non Communicable Diseases (NCD) prevention
- Developing communication strategy on reproductive health

Following are the major ongoing activities for 2014.

- Developing of communication strategy for chronic kidney diseases
- Finalizing guidelines for mothers' support groups
- Developing life skills manual focusing on substance misuse
- Developing the Behavioral Change Communication (BCC) strategy on
  1. Family Planning and Adolescent Health
  2. Well Woman Clinic (WWC) and Maternal and Neonatal Health (MNH),
  3. Gender Based Violence (GBV)
  4. Adolescent Sexual and Reproductive Health (ASRH)
- Developing training module for preventable diseases by making use of Communication for Behavioral Impact (COMBI)

Furthermore routinely, HEB provided technical consultations for advisory committees, workshops, research and surveys on invitation by other public organizations to share its expertise.

5.1.9.3.2 Strategic Objective No. 2 : Communication for public awareness and behavioral changes leading to health promotion

Media seminars are the main, continuous awareness program for the media personnel by HEB aimed to create public awareness about emerging current health problems, health promotion, health programs for behavior changes and life style modification towards good health in the community. Media seminars are typically held with the participation of 10 or more expert resource persons and around 90 media personnel representing both printed and electronic media. This service to create public awareness aiming lifestyle modification towards good health in the community through has been provided for years (since 1980s) by HEB and appraised by all sectors. Every year HEB conducts 15 - 20 media seminars on current health issues and national and international days on particular health related issues.

Following are some of the media seminars held in 2014.

- World Health Day Media Seminar
- Media Briefing on Dengue
- Media Seminar to Increase Public Awareness on Epilepsy
- Media Seminar on Dengue
- Media Seminar on World Leprosy Day
- National Nutrition Month Media Seminar
- National Breast Feeding Week Media Seminar
- Media Seminar on Safe Motherhood
- Media Seminar on Maternal and Child Nutrition
- Media Seminar on Poison Week
- World Sight Day Media Seminar
- World Rabies Day Media Seminar
- Media Seminar on World Children's Day

In addition HEB provided technical expertise for interviews on emerging and current health issues for newspapers, radio and TV.

HEB played a vital role in public awareness about emerging health problems, health promotion and healthy behavior changes by actively participating in all mass scale health and health related exhibitions, national campaign days and community events.

HEB maintained 0710 107 107 "Suwasariya" 24X7 round the clock contact centre for the public with zero down time. It provides fast and accurate expert advice by doctors in all three languages about any health issue and assist the public to make better informed decisions regarding their health anywhere and anytime they need help through telephone calls and e-mails. This service is well supported by a tri-lingual web site "www.suwasariya.gov.lk" intended for general public which is hosted with zero down time and contains articles about health promotion, prevention, common diseases and details about government health services.

5.1.9.3.3 Strategic Objective No. 3 : Development of health education promotion, advocacy and communication materials

Various types of health education promotion, advocacy and communication materials, both printed (posters, wall charts, pennants, leaflets, stickers, booklets) and electronic (short films, video clips, power point presentations) were produced over the period to address emerging and current health issues such as Dengue, Kidney diseases, Leptospirosis, dental health, basic hygiene related health problems, alcohol & tobacco prevention, malnutrition and non-communicable diseases (NCD).

The four (4) Behavioral Change Communication (BCC) strategy books on Family Planning and Adolescent Health, Well Woman Clinic (WWC) and Maternal and Neonatal Health (MNH), Gender Based Violence (GBV) and Adolescent Sexual and Reproductive Health (ASRH) were launched by HEB.

5.1.9.3.4 Strategic Objective No. 4 : Capacity building of health care staff and other personals involved or interested in health promotion

HEB routinely provides well-structured continuous national level in-service training programs and orientation programs for health care staff.

Following are some of the categories that received these training programs during the year.

- Medical Officers of Health (MOH)
- Regional Epidemiologists (RE)
- Medical Officers Maternal and Child Health (MOMCH)
- Dental Surgeons attached to Community Dental Clinics
- Health Education Officers (HEO)
- Public Health Nursing Sisters
- Nursing Officers - Health Education
- Senior Public Health Midwives and Public Health Midwives
- Senior Public Health Inspectors and Public Health Inspectors
- School Dental Therapists
- Dental Surgery Assistants, ect.

In addition to above national level programs HEB conducted district level Training of Trainers (TOT) programs on life-skills and programs on communication skill development for primary health care staff.

Apart from above in-service training, HEB routinely provides under graduate and post graduate training. Training the medical students from Medical Faculties (eg: University of Sri Jayewardenepura) is one example for under graduate trainings conducted. Post graduate training programs were carried out for medical officers on rotation from Post Graduate Institute of Medicine (PGIM) such as Diploma in Child Health, Diploma in Disaster Management, MSc and MD; Community Medicine, MSc and MD; Medical Administration, etc.

During the year HEBs staff itself received training on English and Advanced English Diplomas (SLIDA), Parallel Thinking, Project Proposal Preparation, Disaster Management and Counselling, ect. Apart from that, periodic capacity building and experience sharing sessions were held for "Suwasariya" contact centre service providers.

HEB also provides training programs for other personals involved or interested in health promotion. Following are some of ongoing capacity building community level programs aimed at developing and empowering, community groups and volunteer groups to address emerging health issues in the community through health promotion approach.

Establishing "Mother Support Groups" (MSG) at village levels is an example for a successful community based program conducted under the guidance of HEB. These Mother Support Groups take leadership and work cordially with other sectors and the community, towards the improvement of nutrition status and wellbeing of the children and families.

HEB conducts specifically designed nutrition improvement program for vulnerable groups like estate community and it is going on well with the support and appreciation from other sectors.

HEB has initiated an innovative program to address smoking and alcohol issue among youth through developing life skills (how to overcome challenges successfully in day to day life). "Sujatha Daruwo" is an example, which is conducted for adolescent school children to, "say no to smoking and alcohol" and received very impressive feedback.

HEB conducts reproductive health program for young people to deliver scientific knowledge about the subject while addressing the myths and wrong information.

Developing households and public places such as hospitals, preschools, schools, villages, work places, etc., as health promotion settings is another successful program conducts by HEB and appreciated by all parties.

Another milestone is planning an e-learning system for public health workforce across the country and link them which will facilitate to update their knowledge in emerging health information while utilizing it for public awareness.

5.1.9.3.5 Strategic Objective No. 5 : Monitoring & evaluation of health promotion programs

Following national, provincial, district and divisional (MOH) level reviews and researches were conducted on health promotion programs during 2014.

- National level school dental therapist review programmme
- National level monitoring of health promotional preschool activities

- Review meetings on Mothers' Support Groups (MSG), district level
- Review of developing health promotion settings at district level
- District level review of nutrition communication programs
- District and MOH level review of health promotion activities
- Evaluation of skill based health promotion interventions in preschools at selected divisional (MOH) levels
- Research on oral health literacy status of pregnant mothers in Colombo district
- Routine monitoring of calls to 0710 107 107 "Suwasariya" 24X7 round the clock contact centre for service quality
- Periodic (monthly) monitoring of "www.suwasariya.gov.lk" tri-lingual web site, based on visitors, page impressions and referrers
- Periodic (annual) evaluation and descriptive study on health information seeking behavior of "Suwasariya" contact centre
- Routine monitoring and indexing published health related newspaper articles by HEB resource centre

5.2 Specialised Public Health Programmes

5.2.1 Anti Malaria Campaign

The Anti Malaria Campaign is a specialized campaign of the Ministry of Health, which comprises of the Directorate and twenty two decentralized district-level regional offices. With a vision of a "Malaria Free Sri Lanka" and a mission to "plan and implement a comprehensive programme to sustain intensive surveillance and outbreak preparedness, prevention and rapid response for malaria elemination in Sri Lanka and to prevent re-introduction of malaria to Sri lanka", the campaign is mainly involved in the formulation of the National Malaria Control Policy, monitoring and evaluation of the country-wide malaria situation, provision of technical guidance and resource to provincial malaria control programmes, co-ordination of training and research activities in malaria and liaisons with foreign donor agencies.

Sri Lanka's goal is to obtain certification by the World Health Organization as a "malaria-free country" for which required 3 successive years without malaria.

5.2.1.1 Objectives

The policies and strategies were directed towards the elimination of indigenous malaria from Sri Lanka by the end of 2014. Keeping Sri Lanka free of malaria for over a year is a national achievement that very few countries in this part of the world, and indeed in the tropics, have succeeded in. We need to strive much further to prevent the disease returning, and to keep the country free of malaria in the future.

The objectives are as follows :

1. To sustain malaria free status by prevention of re-introduction of malaria to Sri Lanka
2. To be eligible for WHO certification of malaria elimination in Sri Lanka by 2016
3. To maintain zero mortality due to malaria in Sri Lanka

5.2.1.2 Strategies for Malaria Elimination

- Strengthen services for surveillance for malaria case detection and protection of vulnerable population
- Maintain clinical skills, capacity and services for management of malaria cases
- Strengthen outbreak preparedness, prevention and response to malaria outbreaks
- Strengthen entomological surveillance and response through integrated vector management
- Establish a rigorous quality control system for malaria elimination
- Strengthen IEC activities to raise awareness on the malaria elimination programme
- Improve programme management and performance
- Engage in operations and implementation research
- Monitor and evaluate programme performance

5.2.1.3 Malaria Situation in Sri Lanka - 2014

The Anti Malaria Campaign had set its targets on eliminating *P. falciparum* malaria from Sri Lanka by 2012 and *P. vivax* malaria by 2014. No indigenous malaria cases have been reported from any district in the country since November 2012. This has been achieved well before the targeted time lines. In addition, zero mortality due to malaria has been sustained in the country, owing to a high standard of clinical management of severe malaria patients. As a country that has faced many malaria outbreaks and epidemics in the past, with death tolls exceeding the thousands in certain years even in the recent past, and also as a country that has made several futile attempts at eradicating the disease, this is a major achievement on the road to a malaria free Sri Lanka.

5.2.1.4 Imported Malaria

Since the end of the separatist war, Sri Lanka has been on a steep development trajectory with the building of new air and sea ports, including in areas that were previously endemic for malaria; the construction of several highways traversing the country; increasing global business investments; and a rapidly growing tourist industry, all of which are associated with increased travel of foreign nationals; and introduction of foreign labour into the country.

These have resulted in an influx of tourists; imported labour from malaria-endemic countries; refugees from neighbouring endemic countries; Sri Lankan expatriates returning home; and nationals travelling for business or leisure, all of which are bringing a steadily increasing proportion of imported malaria cases into the country. In 2014, nearly 70% of imported malaria was among travelers of Sri Lankan origin.

The major threats that could re-introduce malaria to the country include the following:

There are increasing numbers of malaria-infected persons entering Sri Lanka from highly malarious countries, which could introduce malaria back into the country if we are not vigilant. Neighbouring countries are not only highly malarious but some harbour dangerous drug-resistant malaria.

Although there is no malaria parasite being transmitted in the country, the mosquito vector which carries it, is highly prevalent in the dry and intermediate zones. Thus the threat of malaria being re-introduced to and re-established in the country is high.

Malaria has become a forgotten disease among doctors and health care staff and therefore patients risk a delayed diagnosis which increases the chances of spreading the disease to others.

People living in Sri Lanka have lost their immunity to malaria because the disease is no more, which makes us more prone to malaria epidemics if the disease returns.

5.2.1.5 Epidemiology

Table 5.2.1 : Malaria Incidence in Sri Lanka, 2014

Indigenous	Imported
0	49

There were no indigenous malaria cases reported during the year 2014 but the number of imported malaria cases detected during this period, shows a decrease when compared with 2013. Figure 5.2.1 shows species distribution of these imported cases.

Fig 5.2.1 : Species of Imported Malaria, 2014

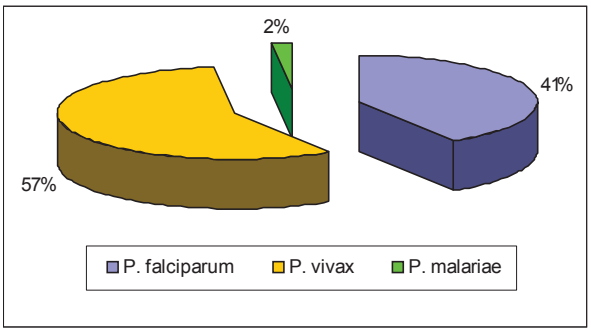


Table 5.2.2 shows country of origin of the imported malaria cases and nationality of these patients.

Table 5.2.2 : Distribution of Imported Malaria by Country of Origin & Nationality

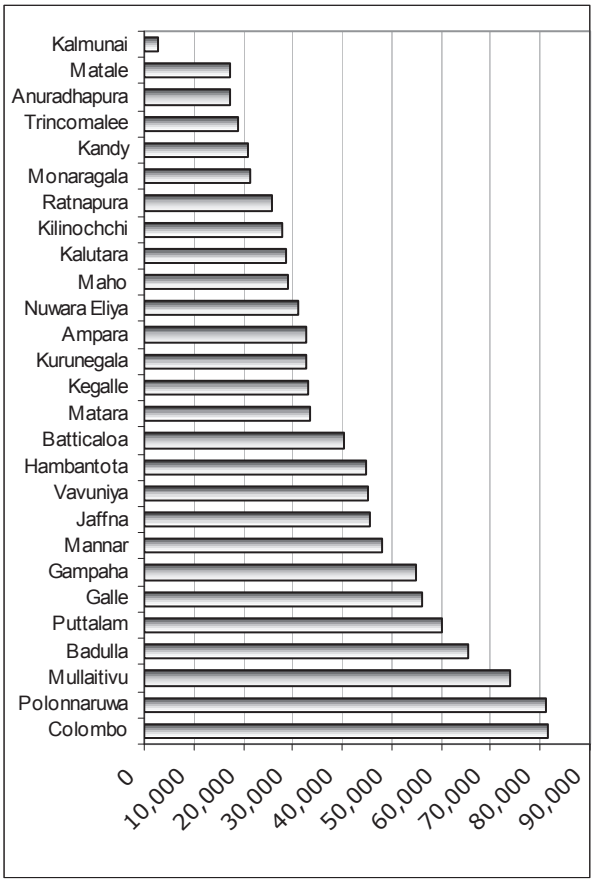
Country of origin	Nationality		Total
	Sri Lankan	Foreign	
SEA Region	**17**	**14**	**31**
India	17	6	**23**
Myanmar		1	**1**
Indonesia		1	**1**
Pakistan		6	**6**
African Region	**17**	**1**	**18**
Burkina Faso	1		**1**
Gabon		1	**1**
Ghana	1		**1**
Kongo	1		**1**
Madagascar	1		**1**
Malawi	1		**1**
Mozambique	1		**1**
Nigeria	4		**4**
Sierra Leone	3		**3**
Sudan	3		**3**
Uganda	1		**1**
Total	**34**	**15**	**49**

5.2.1.6 Screening for Malaria

A total number of 1,069,817 blood smears were examined during 2014 for the purpose of detection of malaria parasites by the departmental staff attached to the medical institutions and the Anti Malaria Campaign including its regional offices.

Figure 5.2.2 shows the blood smears examined during the year, district wise.

Fig 5.2.2 : Blood Smears Examined



The policy is that a clinical suspicion of malaria infection in a patient seeking treatment should always be confirmed by the examination of a peripheral blood smear or through testing for malaria antigens using Rapid Diagnostic Test Kits (RDTs) prior to treatment.

Microscopy using thick and thin blood films has been the standard means of laboratory diagnosis. As a complementary method to microscopy AMC adopted the use of RDTs for the diagnosis of malaria. RDTs and microscopy are being used in the public and private sector health system.

5.2.1.7 Status of Drug Resistance and Drug Policy

All the *P. falciparum* and *P. vivax* positive patients were followed-up upto 42 days to detect resistant strains of the parasite to artemether-lumefantrin and chloroquine respectively. There were no resistant *P. falciparum* and *P. vivax* cases detected during year 2014 too.

5.2.1.8 Sustainable Vector Control Measures Based on the Principles of Integrated Vector Management

Sri Lanka has high receptivity to malaria on account of suitable breeding places like paddy fields, irrigation wells, quarry pits, streams, river beds and sand pools. In addition, large scale development projects including rail and roads are going on which may lead to ecological changes suited for breeding of mosquitoes.

Ongoing construction projects are leading to the creation of new vector breeding sites, in previously endemic areas. Meanwhile, the principal vector of malaria, *A.culicifacies*, and secondary vectors such as *A. subpictus* are prevalent in the country. Mosquito species and their prevalence imply a continuing high receptivity to malaria in previously endemic areas. This, when combined with the increasing reports of imported malaria in diverse parts of the country, almost certainly points to a sustained high risk for malaria reintroduction unless rigorous measures are taken to prevent it.

Inbound migration from neighboring countries and from some African countries endemic for *P. falciparum* may make Sri Lanka vulnerable for introduction of virulent strains.

Being a country with high receptivity and vulnerability in the phase of prevention of reintroduction of malaria very high quality surveillance system as well as a preparedness is extremely important and island wide parasitological and entomological surveillance were carried out continuously throughout the year.

When there is a risk of transmission through imported cases, all the necessary measures for vector control as well as disease control were carried out.

5.2.1.9 Financial Support

Financial support for the campaign is received from the government of Sri Lanka, Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and WHO.

5.2.2 National Programme for Tuberculosis Control and Chest Diseases (NPTCCD)

National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) 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, Central Drug Stores of the NPTCCD, District Chest Clinics (DCCs) of Colombo, Gampaha and chest ward at DH Kopay are under the direct administrative purview of the Director, NPTCCD.

NPTCCD provides it services through a network of chest clinics, chest wards and laboratories. Inward facilities for TB patients are provided at the National Hospital for Respiratory Diseases (NHRD) situated in Welisara and 13 other chest wards situated in government hospitals.

Diagnostic services are provided through National TB Reference Laboratory (NTRL), Intermediate Culture Laboratories in Kandy and Rathnapura, district chest clinic laboratories and over 150 microscopy centers.

Central Drug Stores of the NPTCCD is responsible for estimation, procurement, storage 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 under the administrative scope of respective provincial and 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, NPTCCD is responsible for the formulation of policies and guidelines for control of TB and other respiratory diseases and for planning, implementation, monitoring and evaluation of the TB control activities carried out in the entire country.

Surveillance of TB is another main activity carried out by the NPTCCD. It also acts as a coordinating body between the central ministry and provincial health sector and other governmental and non-governmental organizations.

NPTCCD carries out training of medical and paramedical staff engaged in TB care and carries out public awareness through various channels of communication.

The Government of Sri Lanka is the main source of funding for the NPTCCD. In 2014, Rs. 3.7 million was allocated from the government funds and it was mainly used for payment of salaries and wages and for major constructions. In addition, TB control activities are supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). WHO provides technical assistance to the programme and Global Drug Facility (GDF) provides Fixed Dose Combination (FDC) anti TB drugs. In 2014, World Bank also provided financial assistance to upgrade NTRL to Bio Safety Level 3 and to strengthen TB control activities at provincial level.

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.

5.2.2.3 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.

5.2.2.4 Targets

- To reach and thereafter to sustain the 2005 global targets achieving at least 70% case detection and at least 85% treatment success among TB cases under DOTs; in order to
- reach the interim targets of halving TB deaths and prevalence
- 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

N/A : Not Available

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 DOTS Population Coverage

DOTS population coverage is the pecentage of people living in areas where health service has adopted the Directly Observed Therapy Short-course (DOTS) strategy. The units of population covered are usually the administrative districts in the country and the outcome is usually expressed as a percentage of the national population.

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 Incidence of TB

The incidence of TB is defined by the WHO as the numebr of new and relapse cases reported in a specified time period.

5.2.2.6.2 Case Detection Rate

Case ditection rate is defined as "Percentage of total number of incident TB cases notified out of the total number of estimated incident cases of TB during the given year".

5.2.2.6.3 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.

5.2.2.6.4 Sputum Conversion Rate

Sputum conversion rate is the percentage of smear-positive pulmonary TB cases registered in a specified period that converted from smear positive to smear negative at the end of intensive phase of treatment.

5.2.2.6.5 Lost to Follow up Rate

The lost to follow up rate is defined as the percentage of TB cases registered in a specified period that inturrupted treatment for more than two consecutive months.

5.2.2.6.6 Death Rate

The death rate is defined as the percentage of TB cases registered in a specified period that died from any reason during the course of treatment.

5.2.2.7 Case Detection

The total number of 9,473 cases of all forms of TB was reported from DCCs in the quarterly reports of 2014. It consists of 8,692 new cases, of which 4,293 (49.4%) were new smear-positive pulmonary tuberculosis (smear +ve PTB), 1,831 (21.1%) were new smear-negative (smear –ve PTB) cases and 2,568 (29.5%) were new EPTB cases.

Furthermore, 456 retreatment (relapse, treatment after failure and treatment after lost to follow up) cases and 325 other (patients whose treatment history unknown, treated outside NTP, etc.) cases were reported in 2014.

According to the new instructions by the WHO, case detection rate is calculated only for incidence (new and relapse) cases since 2012. The case detection rate of incidence TB cases was 66.1% in 2014.

5.2.2.8 District Distribution of Cases of TB

The highest number of all forms of TB cases was reported from the Western Province which accounts for 42.7% (4,044) of all cases of TB. Colombo district alone account for 24.7% (2,342) of cases.

Fig 5.2.3 : Case Detection of TB, 2000 - 2014

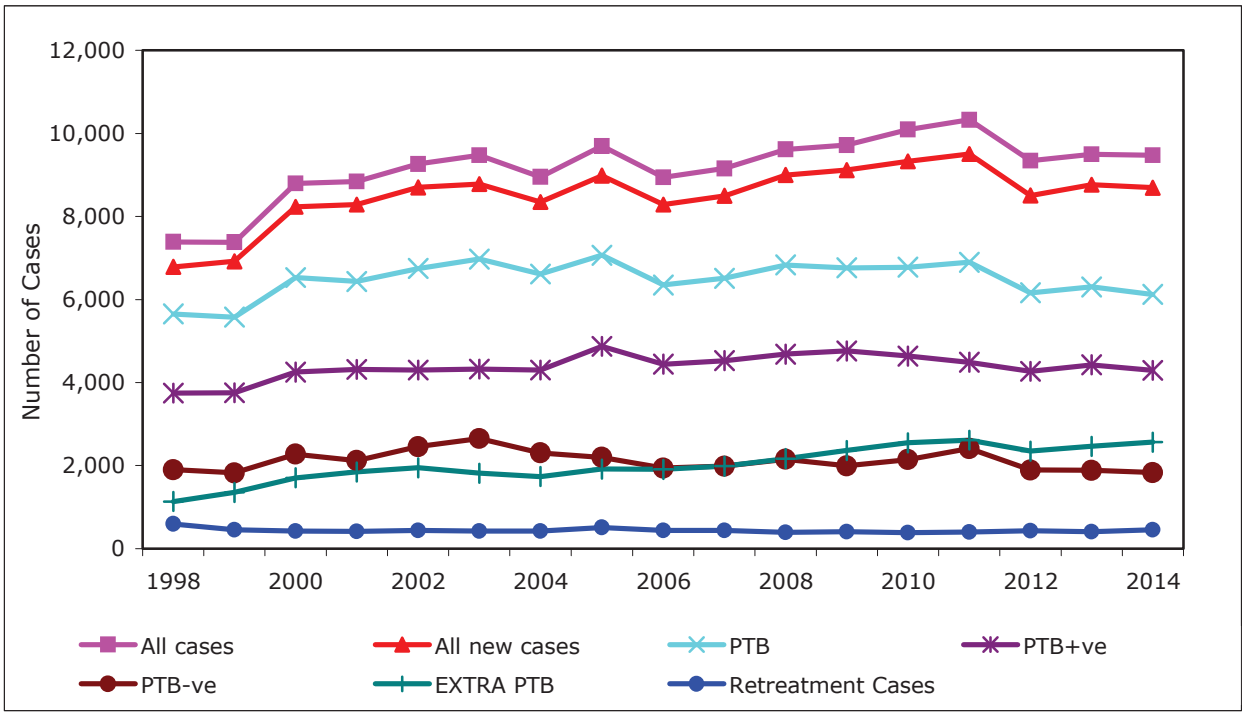


Table 5.2.4 : Case Detection by the District of Registration, 2014

District	New Cases				Relapse	Others				Treatment After Failiure	Treatment After Default	Total
	PTB sp+ve	PTB sp-ve	EPTB	Total		sp+ve	sp-ve	EPTB	Total			
Colombo	1,120	355	598	2,073	76	40	37	62	139	7	47	2,342
Gampaha	536	180	264	980	32	6	11	8	25	8	21	1,066
Kalutara	292	100	201	593	21	-	3	11	14	1	7	636
Kandy	231	184	208	623	17	1	16	8	25	4	7	676
Matale	70	33	58	161	6	-	2	3	5	-	-	172
Nuwara Eliya	101	63	70	234	6	-	1	4	5	4	1	250
Galle	212	103	123	438	14	-	3	7	10	3	8	473
Matara	120	64	84	268	6	-	-	4	4	2	-	280
Hambantota	60	21	51	132	5	-	-	-	-	1	1	139
Jaffna	91	60	83	234	12	-	4	1	5	4	1	256
Vavuniya	33	11	13	57	2	-	-	-	-	1	-	60
Batticaloa	89	38	50	177	8	1	3	2	6	2	-	193
Ampara	28	20	22	70	4	-	-	-	-	-	-	74
Kalmunai	67	69	29	165	8	1	2	1	4	-	-	177
Trincomalee	60	27	40	127	3	-	2	-	2	3	1	136
Kurunegala	218	145	120	483	13	2	41	25	68	3	1	568
Puttalam	89	18	65	172	8	-	-	-	-	2	-	182
Anuradhapura	142	26	58	226	8	-	1	1	2	2	-	238
Polonnaruwa	71	33	33	137	2	-	-	-	-	4	-	143
Badulla	114	41	64	219	6	-	1	1	2	7	-	234
Monaragala	49	16	24	89	2	-	-	-	-	-	-	91
Ratnapura	251	106	172	529	8	1	2	-	3	3	8	551
Kegalle	189	87	100	376	14	-	-	1	1	1	2	394
Mannar	14	12	18	44	1	-	2	3	5	-	-	50
Mullaitivu	18	10	6	34	2	-	-	-	-	-	-	36
Kilinochchi	28	9	14	51	4	-	-	-	-	-	1	56
Total	4,293	1,831	2,568	8,692	288	52	131	142	325	62	106	9,473

Data from quarterly reports of case finding from districts

Uwa province account for 3.4% (325 cases) of the total case load which was lowest in 2014. The lowest number of all forms of TB (36) was reported from Mullaitivu 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 (1,778 cases). The lowest number of new cases was seen in 0 - 14 age group (313 cases). Out of 8,692 all new cases, 60.3% of new cases were in the productive age group of 15 - 54.

More males (5,656 - 65.1%) were detected with TB than the females (3,036 - 34.9%). The highest number of new TB cases among both males (22.2%) and females (17.3%) was found in the age group of 45 - 54 years.

Fig 5.2.4 : Case Detection of TB by Province, 2014

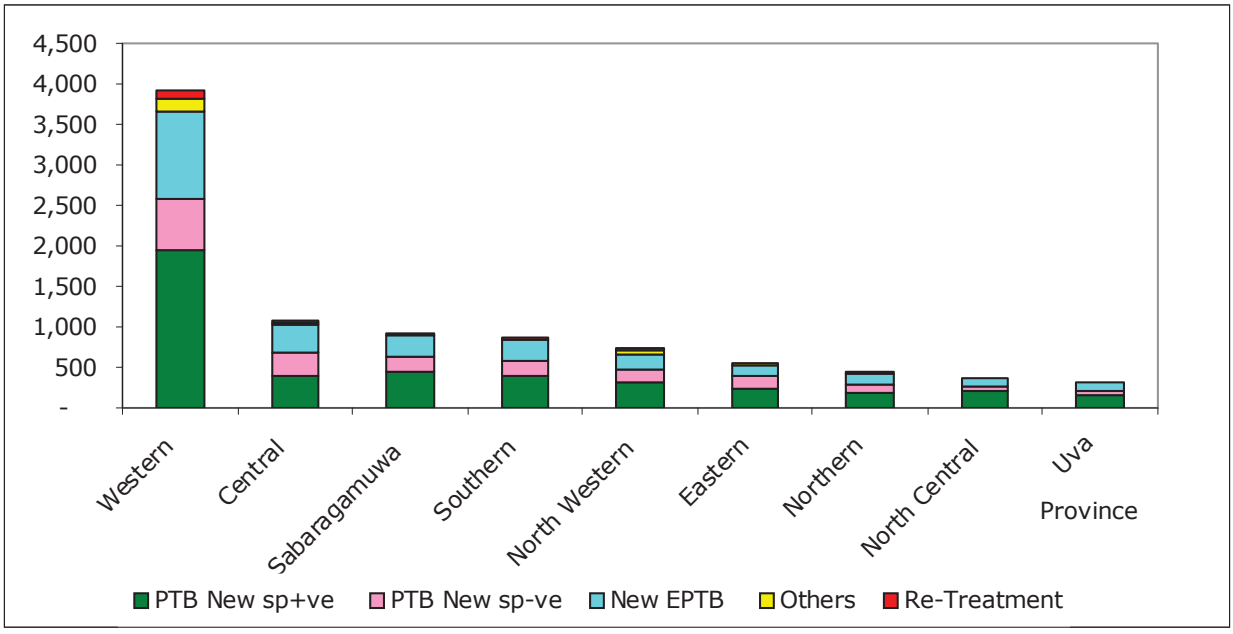
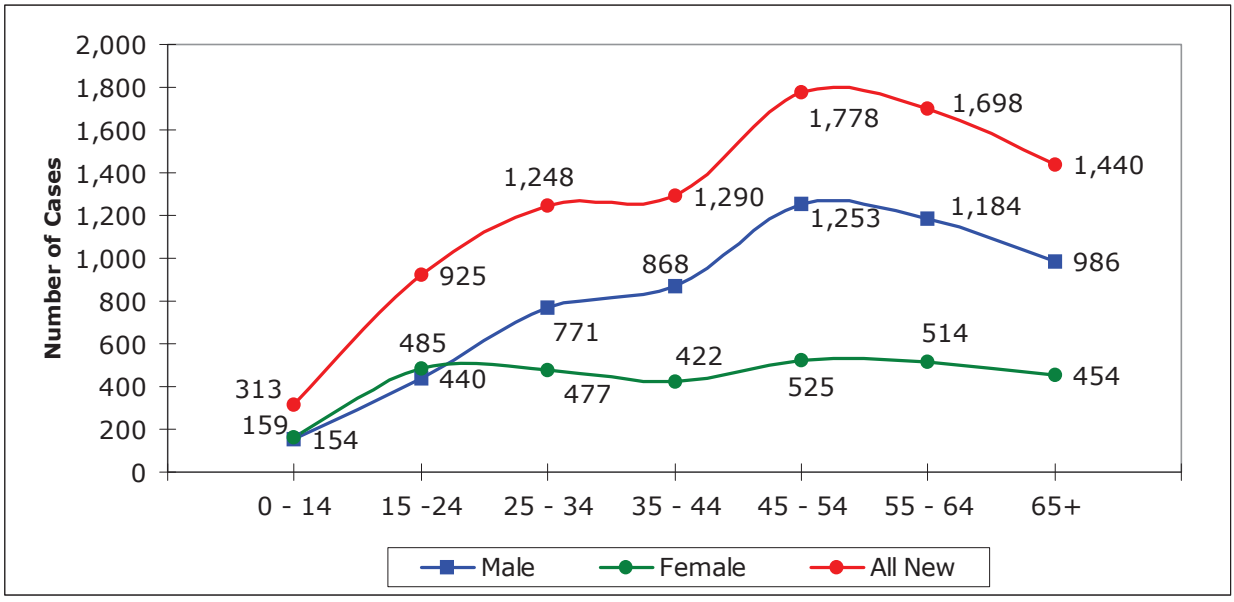


Fig 5.2.5 : Distribution of All New Cases of TB by Age Group in Sri Lanka, 2014



Source : Quarterly Reports of District Chest Clinics

Fig 5.2.6 : Treatment Outcome of New Smear Positive PTB Cases, 2000 - 2013

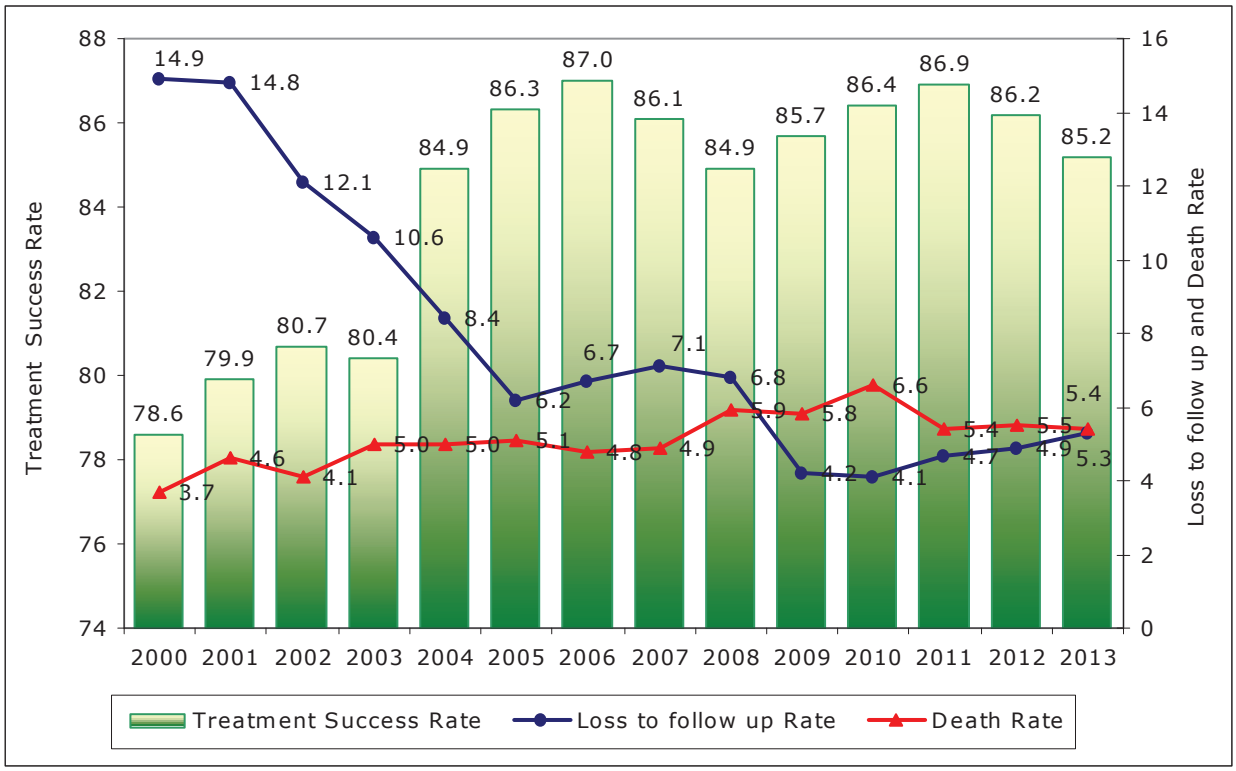
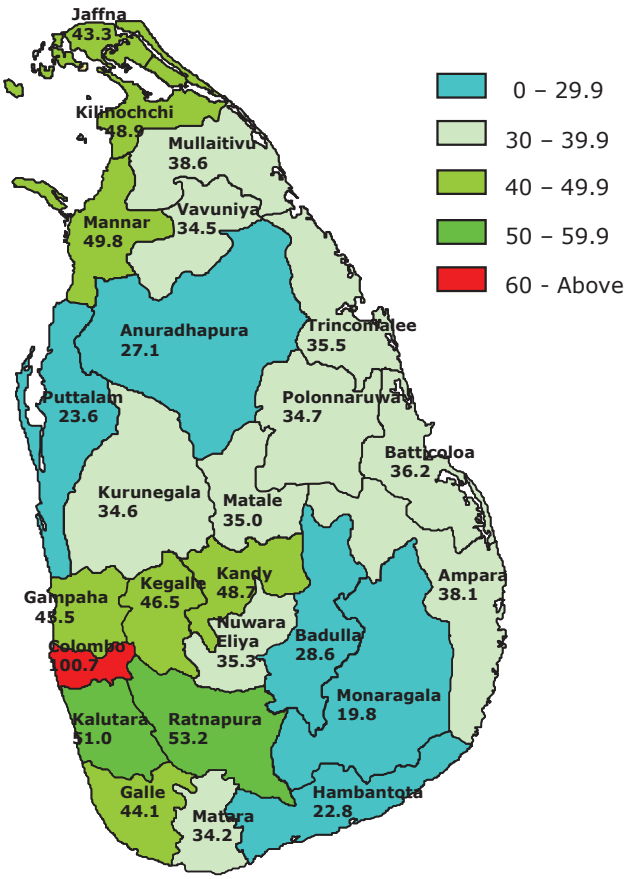
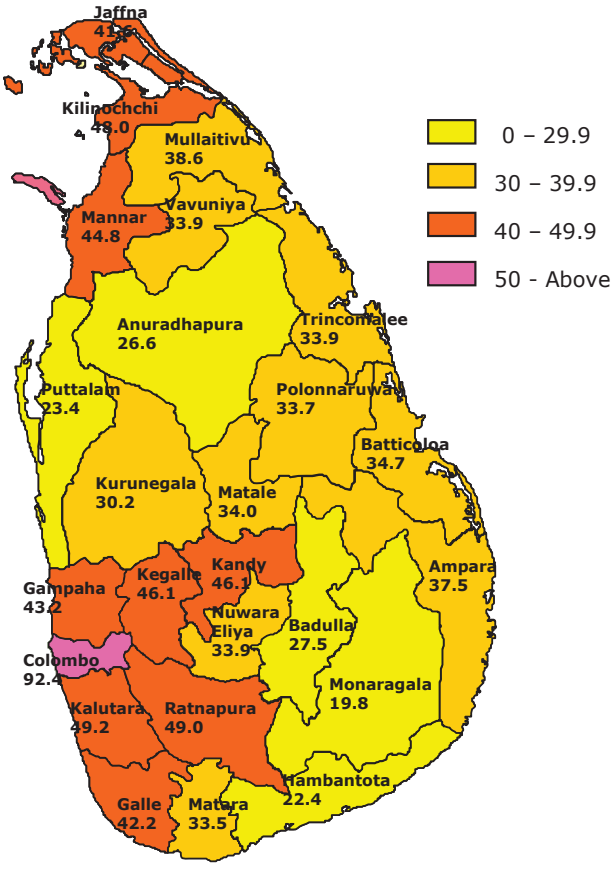


Fig 5.2.7 : Case Detection of TB Patients, Rate per 100,000 Population, 2014



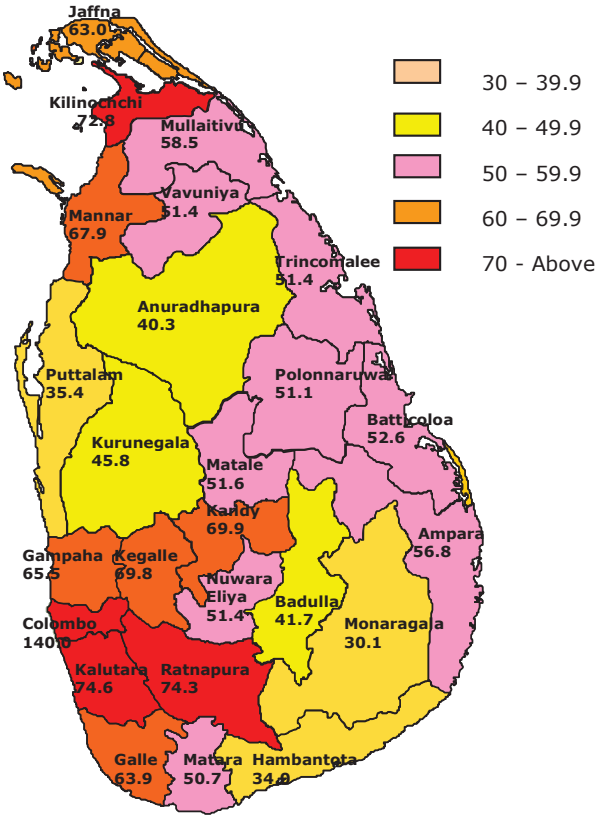
Source : Quarterly Reports of District Chest Clinics

Fig 5.2.8 : Incidence Rate (New and Relapese), 2014



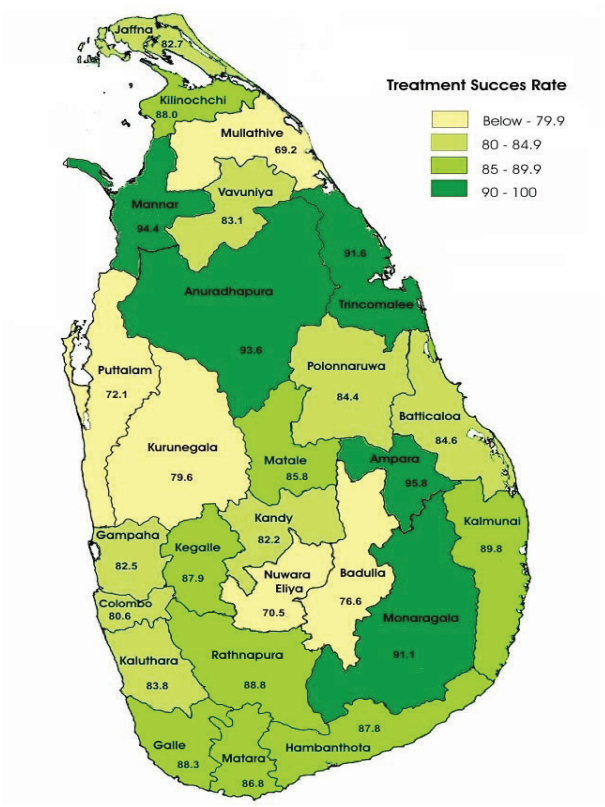
Source : Quarterly reports of District Chest Clinics

Fig 5.2.9 : Case Detection Rate, 2014



Source : Quarterly reports of District Chest Clinics

Fig 5.2.10 : Treatment Success Rate, 2013



Source : Quarterly reports of District Chest Clinics

Table 5.2.5 : Treatment Outcome PTB New Cases (Sputum Positive), 2013

RDHS Division	Total Number Registered	Cured		Treatment Completed		Treatment Success		Died		Failure		Defaulted		Transferred out		Not Evaluated	
		No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate	No	Rate
Colombo	1,101	811	73.7	89	8.1	900	81.7	56	5.1	12	1.1	113	10.3	-	-	20	1.8
Gampaha	519	395	76.1	37	7.1	432	83.2	21	4.0	10	1.9	46	8.9	5	1.0	5	1.0
Kalutara	341	274	80.4	20	5.9	294	86.2	18	5.3	4	1.2	21	6.2	-	-	4	1.2
Kandy	234	184	78.6	8	3.4	192	82.1	19	8.1	5	2.1	6	2.6	2	0.9	10	4.3
Matale	71	63	88.7	-	-	63	88.7	6	8.5	1	1.4	1	1.4	-	-	-	-
Nuwara Eliya	112	78	69.6	1	0.9	79	70.5	6	5.4	6	5.4	4	3.6	-	-	17	15.2
Galle	243	196	80.7	18	7.4	214	88.1	11	4.5	3	1.2	9	3.7	6	2.5	-	-
Matara	94	87	92.6	-	-	87	92.6	6	6.4	1	1.1	-	-	-	-	-	-
Hambantota	73	62	84.9	2	2.7	64	87.7	6	8.2	1	1.4	2	2.7	-	-	-	-
Jaffna	95	32	33.7	48	50.5	80	84.2	7	7.4	1	1.1	7	7.4	-	-	-	-
Vavuniya	40	33	82.5	4	10.0	37	92.5	3	7.5	-	-	-	-	-	-	-	-
Batticaloa	125	113	90.4	1	0.8	114	91.2	6	4.8	3	2.4	-	-	-	-	2	1.6
Ampara	24	22	91.7	-	-	22	91.7	-	-	2	8.3	-	-	-	-	-	-
Kalmunai	73	59	80.8	7	9.6	66	90.4	7	9.6	-	-	-	-	-	-	-	-
Trincomalee	66	62	93.9	-	-	62	93.9	2	3.0	1	1.5	1	1.5	-	-	-	-
Kurunegala	197	167	84.8	2	1.0	169	85.8	13	6.6	3	1.5	9	4.6	-	-	3	1.5
Puttalam	95	61	64.2	10	10.5	71	74.7	4	4.2	2	2.1	6	6.3	6	6.3	6	6.3
Anuradhapura	164	156	95.1	-	-	156	95.1	7	4.3	1	0.6	-	-	-	-	-	-
Polonnaruwa	67	56	83.6	-	-	56	83.6	4	6.0	2	3.0	2	3.0	2	3.0	1	1.5
Badulla	126	89	70.6	4	3.2	93	73.8	9	7.1	3	2.4	5	4.0	1	0.8	15	11.9
Monaragala	57	52	91.2	-	-	52	91.2	5	8.8	-	-	-	-	-	-	-	-
Ratnapura	280	253	90.4	6	2.1	259	92.5	9	3.2	2	0.7	6	2.1	4	1.4	-	-
Kegalle	176	155	88.1	6	3.4	161	91.5	9	5.1	2	1.1	2	1.1	-	-	2	1.1
Mannar	16	15	93.8	-	-	15	93.8	-	-	1	6.3	-	-	-	-	-	-
Mullaitivu	11	10	90.9	-	-	10	90.9	1	9.1	-	-	-	-	-	-	-	-
Kilinochchi	23	22	95.7	-	-	22	95.7	1	4.3	-	-	-	-	-	-	-	-
Total	4,423	3,507	79.3	263	5.9	3,770	85.2	236	5.3	66	1.5	240	5.4	26	0.6	85	1.9

Source : Quarterly Reports of District Chest Clinics

In 2013, 4,423 new smear positive pulmonary TB cases were registered under Directly Observed Therapy Short Course (DOTS) for treatment. The cure rate among registered cases was 79.3% (3,507) and a further 5.9% (263) completed treatment (no laboratory confirmation of cure), giving an overall treatment success rate of 85.2% (3,770). This is a slight decrease in comparison to 2012 where the treatment success rate was 86.2%. The failure rate remained low at 1.5% with 5 districts not having any single case of treatment failure. The defaulter rate was 5.4% with only 5 districts having lost to follow up rates above 5% (WHO target <5%) and with 10 districts were not having any single case of treatment after lost to follow up.

5.2.2.10 Multi Drug Resistant Tuberculosis (MDRTB)

MDRTB remains low (0.13%) in Sri Lanka when comapred to other countries in the region. Only 13 cases of MDRTB were reported in year 2014.

Table 5.2.6 : Incidence of MDRTB, 2008 - 2014

Year	2008	2009	2010	2011	2012	2013	2014
MDRTB cases detected	8	4	8	12	5	4	13

5.2.2.11 TB/HIV Co-infection

Screening of all TB patients for HIV was made mandatory since 2013. The statistics from districts show a considerable increase of screening of TB patients for HIV when compared with past years.

In 2014, 7,409 (78% of total registered) TB patients were screened for HIV. Of these patients 12 (0.1%) were recorded HIV positive.

5.2.2.12 B.C.G. Vaccination

B.C.G. vaccination is included in the Expanded Programme of Immunization (EPI).

5.2.2.13 Key Activities

A Joint Monitoring Mission (JMM) comprised of experts from World Health Organization, South East Asian Regional Office, The Union, Green Light Committee, Global Drug Facility and GFATM was held in mid 2014 to evaluate the TB control activities in the country.

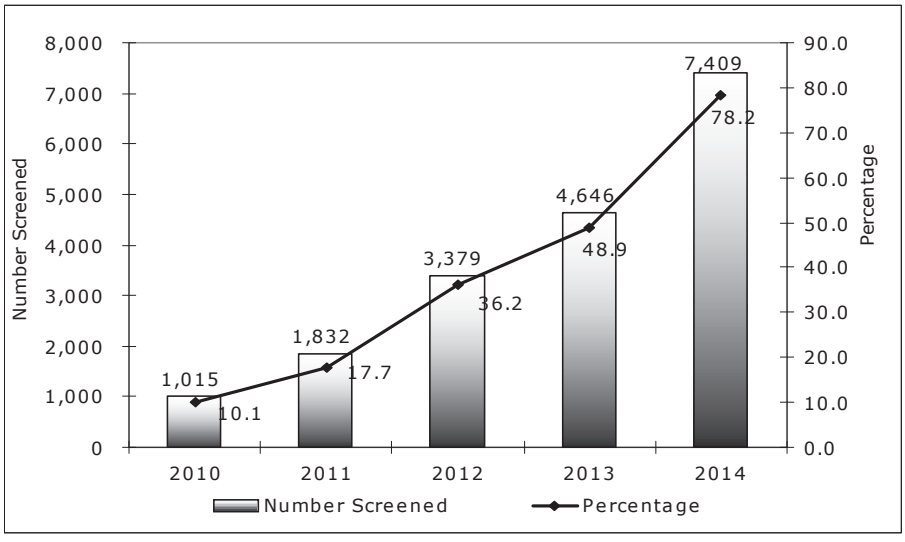
The NPTCCD has revised the exsisting National Strategic Plan for TB Control for the period of 2015 - 2020 in order to implement the recommendations of JMM and to be in par with WHO new post 2015 strategies for TB control.

Furthermore, the NPTCCD has successfully submitted the concept note to the GFATM which is a requirement for new funding model of the GFATM.

The NPTCCD has taken further steps to strengthen case detection by carrying out active screening among high risk groups of TB such as prison inmates, drug addicts, etc.

The diagnostic facilities were further expanded by initiation of construction of culture laboratories in TH Karapitiya and in Jaffna.

Fig 5.2.11 : Treatment Outcome PTB New Cases (Sputum Positive), 2010 - 2014



World TB Day was commemorated on 24th March, 2014 in Colombo under the theme of "4,000 Undetected, A TB Test, Treatment and Cure for All" with the participation of large number of different stakeholders.

World Asthma Day was celebrated in May, 2014 with collaboration of College of Pulmonologists of Sri Lanka and a website; "Asthma Podiththo" was launched.

5.2.3 Anti Filariasis Campaign

5.2.3.1 Background Information

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 on 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% (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.* Since 1949 more cases of Bancroftian filariasis have been reported and there were almost no reported cases of Brugian filariasis since 1969 to 2005. 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 serves as the intermediate host and the microfilaria count coincides with the biting habits of the vector. 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. Female mosquitoes of *Mansonia* species transmit the Brugian filariasis. Breeding of *Mansonia* spp. is associated with aquatic plants such as Pistia, Salvinia, etc.

The male and female adults of the filarial parasite live in the lymphatic system of the affected person.

The adults mate and produce microfilaria (mf) which find their way to the blood stream and they are capable of living for about one year without developing further in the human body.

When mosquito vector takes a blood meal, mf enters to the mosquito from an infected person and moulted to L1, L2 and L3 larval stages of the parasite. L3 larval stage is the infective stage where it is entered to human body when taking a blood meal by vector. Infective L3 larva converts to adults after another two moults in the human body. Only a proportion of persons infected with filarial parasites develop clinical symptoms. Lymphatic filariasis is characterized by a wide range of clinical manifestations. The signs and symptoms may be acute or chronic. Patients with chronic lymphatic filariasis are usually amicrofilaraemic and there is no currently available test to prove active filarial infection, the diagnosis of filariasis should be established on clinical grounds among chronic patients.

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 towards elimination of LF as a public health problem by 2020. Elimination status was defined as a microfilaria rate of < 1%.

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% 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.

AFC of Ministry of Health, Sri Lanka collaborates with other partners such as the WHO, Gates Foundation, Liverpool School of Tropical Medicine-UK, University of St. Louise-USA and National Institute of Health, USA.

5.2.3.2 Vision

Filariasis free Sri Lanka

5.2.3.3 Mission

Eliminate Lymphatic Filariasis and to prevent suffering and disabilities of affected individuals by bringing together a group of central and regional partners to mobilize financial and technical resources to ensure success.

5.2.3.4 General Objectives

- To eliminate Lymphatic Filariasis by interruption of transmission by 2020
- To alleviate suffering and disabilities of affected individuals

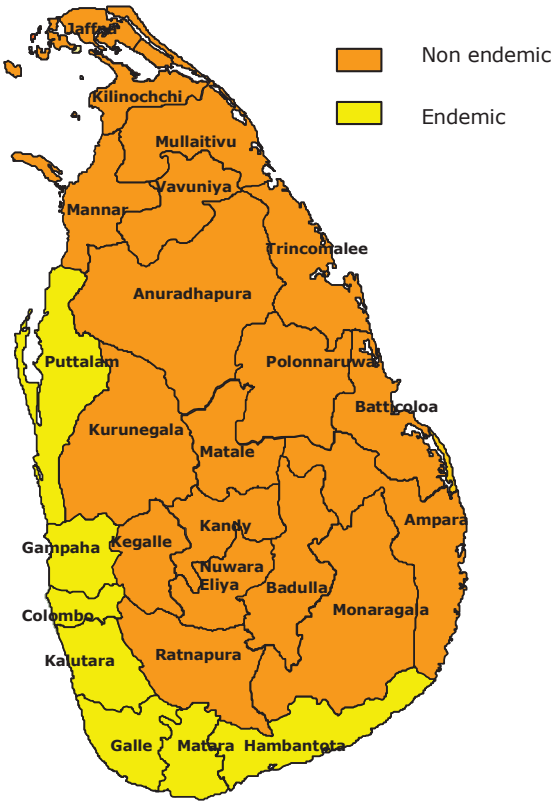
5.2.3.5 Specific Objectives

- To strengthen the parasitological surveillance and control activities
- To strengthen the entomological surveillance and control activities
- To strengthen the laboratory facilities in AFC and RAFUs
- To prevent complications and disabilities of affected individuals by morbidity management

5.2.3.6 Major Activities Implemented in 2014

a) Conducted routine and special night blood filming programmes in endemic areas
b) Treated mf positive and clinically suspected cases
c) Managed lymphoedema patients and educated the lymphoedema patients and caregivers, on morbidity management measures (exercise, elevation, washing, bandaging, wearing of comfortable foot wear, etc.)
d) Conducted vector surveillance and control activities in endemic areas
e) Conducted awareness programmes for health staff and general public
f) Conducted training programmes for medical, paramedical and post graduate students
g) Conducted monthly review meetings with the Regional Medical Officers (Filariasis), patients and district review meetings with the staff attached to RAFUs
h) Conducted research activities
i) Conducted Mass Drug Administration Programme in 14 Medical Officer of Health Areas in Galle District

Fig 5.2.12 : Filariasis Endemic Areas in Sri Lanka



5.2.3.7 Filariasis Endemic Areas in Sri Lanka

In Sri Lanka, filariasis is endemic in the Western, Southern and the North-Western provinces mainly due to rapid and unplanned urbanization, increased population density and also due to the suitable climate for mosquito breeding.

5.2.3.8 Achievements

- With the support from the international partners and WHO, Sri Lanka successfully completed five rounds of MDA in 2006 which covered more than 80% of the population residing in endemic districts.
- In Sri Lanka, mf rate was below 1% over the past 15-20 years and current (2014), mf rate is 0.05%. This is very much below the WHO elimination target of < 1%.
- Transmission Assessment Surveys (TAS) conducted among grade 1 and 2 school children in endemic districts in 2008 and 2011-2013 with the financial and logistic support from WHO and international partners, further confirmed the elimination status.
- In 2011, laboratory of AFC was refurbished and a PCR lab was established. PCR lab further helped to conduct highly sensitive tests to monitor the burden of the disease. Enhanced surveillance studies are continuing simultaneously in hot spot areas among school children, community and vectors with the help of foreign donors.
- Sri Lanka is one of the first countries in South-East Asia region suitable to work towards verification process for the certification on elimination of filariasis. AFC is planning to submit a draft report (dossier) to WHO for the consideration of granting certification on elimination.
- Staffs were instructed to collect 60 microliters of blood during night blood filming to enhance identification of cases with low mf densities.
- In 2012, a Technical Advisory Group (TAG) including the Director General of Health Services, Deputy Director General of Public Health Services, Past Directors, Professors of Parasitology, Director of AFC, Deputy Director of AFC, Consultant Community Physician of AFC, Medical Officers of AFC and some Regional Medical Officers, was created to get the guidance to enhance the filariasis elimination activities.
- AFC continued filariasis vector and parasitological surveys in endemic and non-endemic areas.
- In 2013, about 38,000 night blood films were collected from all Public Health Midwife (PHM) areas in Galle district covering about 3% of the population in each PHM area to identify the high risk areas.
- Website of AFC was launched on 02/07/2013. (www.filariasiscampaign.health.gov.lk)

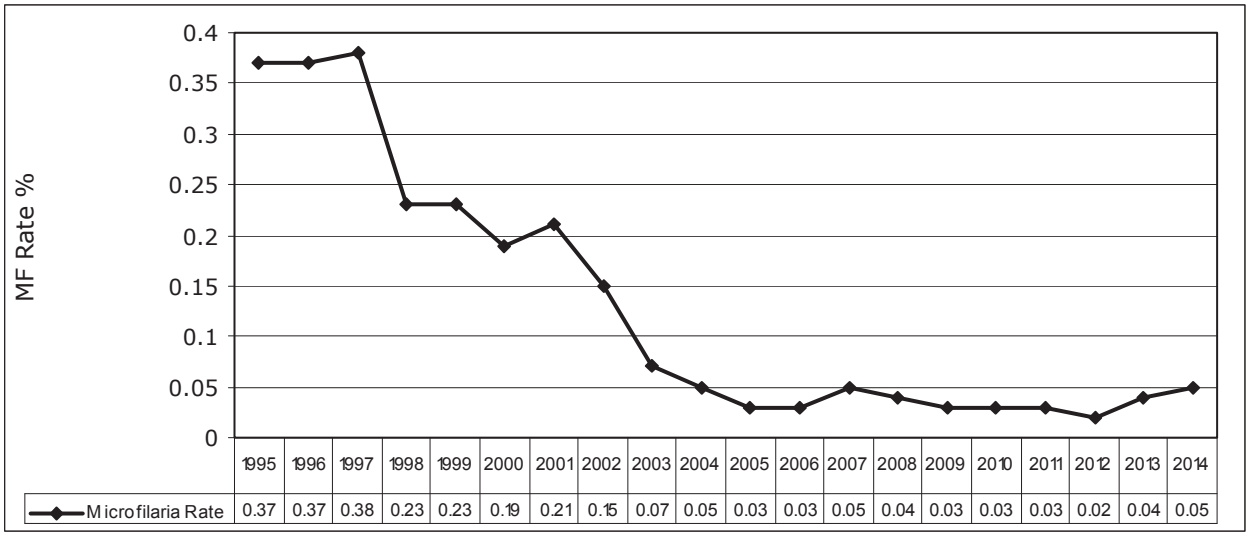
5.2.3.9 Results of Activities Done in 2014

5.2.3.9.1 Parasitological Activities in Endemic Districts

During the year under review (2014), 344,861 night blood films were examined for microfilaria by the thick blood smear technique from endemic districts.

Persons in endemic areas were screened at the night blood filming centres, through house to house visits and during special surveys. Microfilaria rate for 2014 was 0.05 %. (mf rate-number of microfilaria positive persons per 100 persons tested).

Fig 5.2.13 : Microfilaria Rates in Endemic Districts, 1995-2014



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Microfilaria Rate	0.37	0.37	0.38	0.23	0.23	0.19	0.21	0.15	0.07	0.05	0.03	0.03	0.05	0.04	0.03	0.03	0.03	0.02	0.04	0.05

Table 5.2.7 : Results of the Night Blood Filming Surveys in 2014

District	No. of blood films examined	No. of positive blood films	microfilaria (mf) rate %	No. of microfilaria (mf)	microfilaria (mf) density
Colombo	46,412	13	0.03	141	180.81
Gampaha	50,982	12	0.02	203	282.00
Kalutara	70,571	12	0.02	124	172.26
Western Province	**167,965**	**37**	**0.02**	**468**	**210.85**
Galle*	36,746	121	0.33	3,290	453.26
Matara	78,771	14	0.02	81	96.45
Hambantota	5,380	0	0.00	0	0.00
Sourthern Province	**120,897**	**135**	**0.11**	**3,371**	**416.26**
Kurunegala	40,296	3	0.01	81	450.09
Puttalam	15,703	2	0.01	4	33.34
North Western Province	**55,999**	**5**	**0.01**	**85**	**283.39**
Total (Endemic Disticts)	**344,861**	**177***	**0.05**	**3,924**	**369.57**

* Out of these 177 microfilaria positive cases in endemic districts, 9 cases were positive with *Brugia malayi* and these cases were reported from Galle, Gampaha, Hambantota, Puttalam and Kalutara districts

5.2.3.9.2 Entomological Activities in Endemic Districts

Infected and Infective Rates

Infected rate [number of Culex quinquefaciatus mosquitoes with filarial parasite stages (mf, L1, L2 and L3) per 100 Culex quinquefasciatus mosquitoes] and infective rate [number of Culex quinquefaciatus mosquitoes with infective (L3) parasite stages per 100 Culex quinquefaciatus mosquitoes dissected] were 0.55% and 0.007% respectively for the year 2014.

Molecular Biological Assays

Female Culex quinquefaciatus and Mansonia species of mosquitoes collected from endemic districts were subjected to PCR testing at AFC to determine the Wucheraria bancrofti parasite DNA in Culex quinquefaciatus mosquitoes and Brugia malayi in Mansonia mosquitoes. Results of these mosquito pools (20 mosquitoes in each pool) are given in Table 5.2.8.

Fig 5.2.14 : Mosquito Infected Rates in Endemic Districts, 1995 - 2014

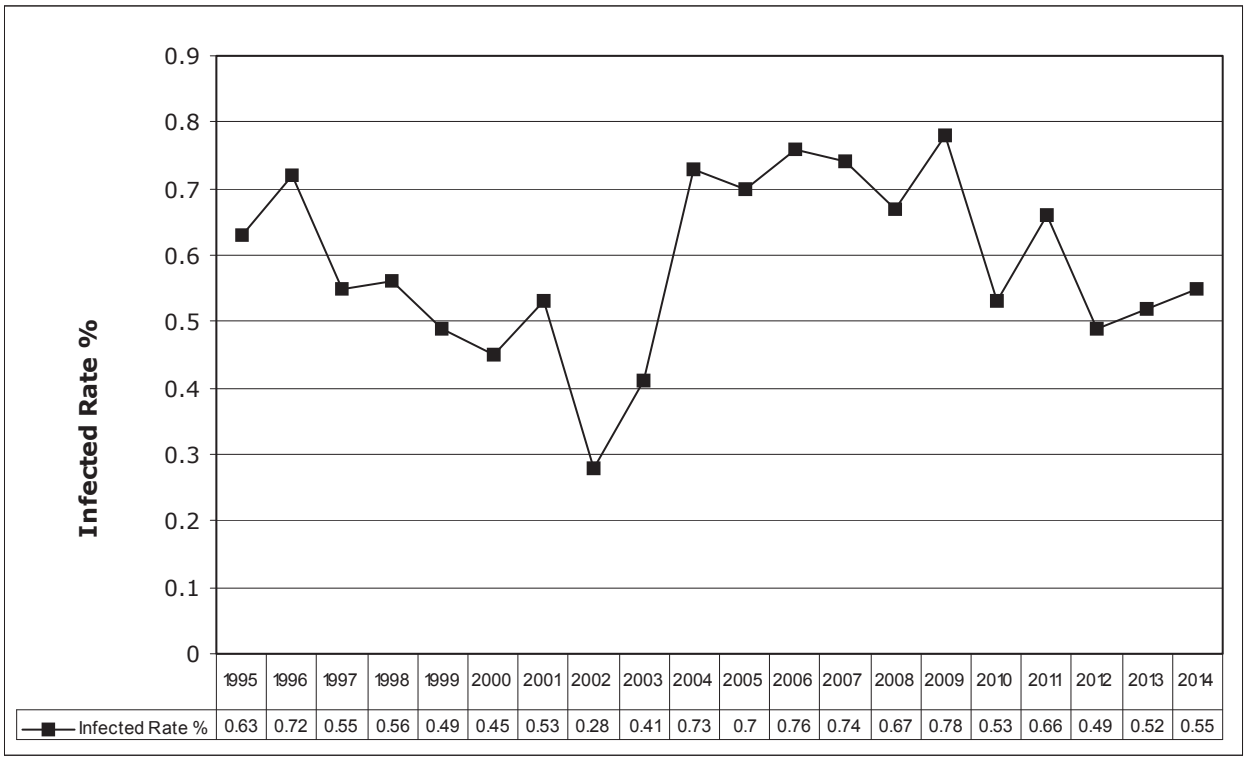


Fig 5.2.15 : Mosquito Infective Rates in Endemic Districts, 1995 - 2014

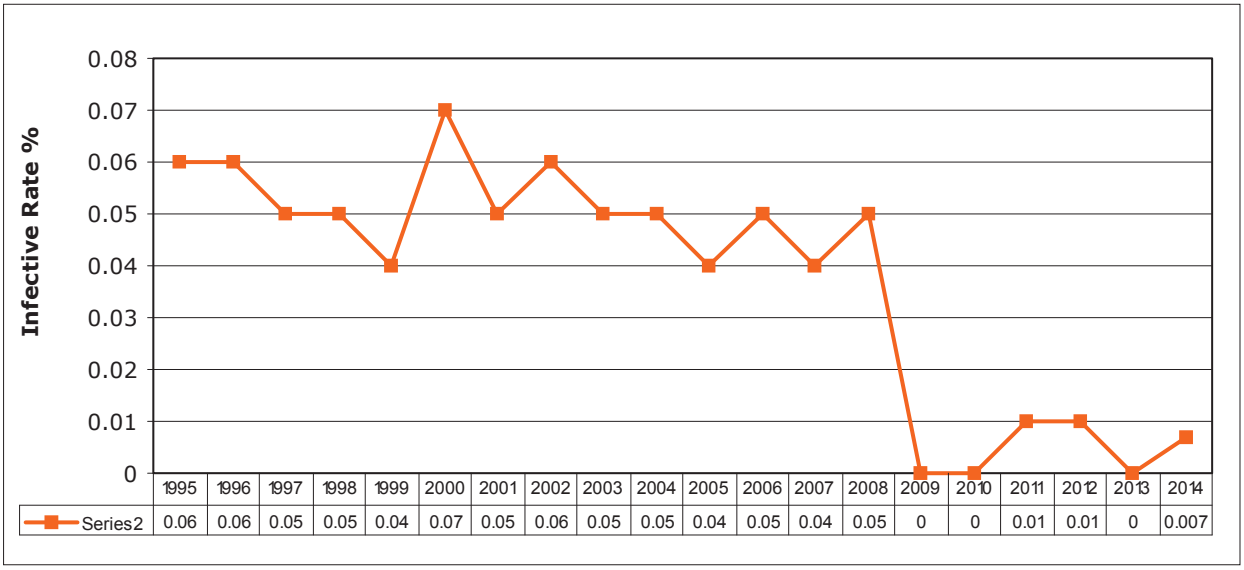


Table 5.2.8 : Results of Molecular Biological Assays in 2014 in Endemic Districts

District		*Culex quinquefacsiatus (Mansonia [a]) mosquito pools*		
		Pools tested	**Pools positive**	**Pools positivity rate (%)**
Colombo	AFC*	101	1	0.99
	RAFU**	44	4	9.09
Kurunegala		64	3	4.69
Puttalam		84 (11[a])	0 (3[b])	0 (27.27[b])
Galle		125	6	4.8
Matara		136	4	2.94
Gampaha		122	6	4.92
Kalutara		98	1	1.02
Total		**774 (11[a])**	**25 (3[b])**	**3.23 (27.27[b])**

* AFC-Anti Filariasis C ** RAFU-Regional Anti Filariasis Unit

[a] Mansonia Mosquito Pools

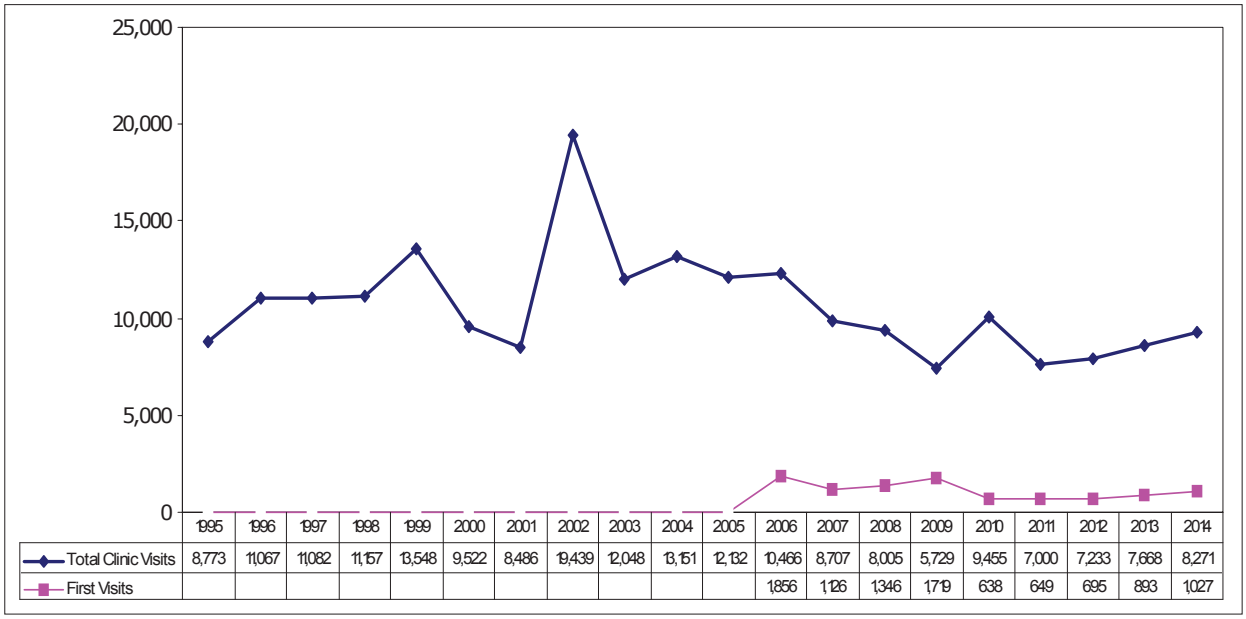
[b] Mansonia Mosquito Pools Positive for Brugia malayi

5.2.3.9.3 Clinical Activities in Endemic Districts

Clinic Visits of Lymphoedema Patients

In 2014, the numbers of first visit lymphoedema patients attended the clinics of AFC and RAFUs were 1,027 and the numbers of clinic visits of past lymphoedema patients were 8,871.

Fig 5.2.16 : Lymphoedema Cases (Visits) Managed at AFC and RAFUs, 1995 - 2014



5.2.3.9.4 Special Research Activities

Molecular Xenomonitoring

With the collaboration of foreign partners and RAFUs, AFC conducted "Molecular Xenomonitoring Surveys" for Wuchereria bancrofti DNA in mosquitoes in two evaluation units (inland and coastal) in Galle district, Sri Lanka in 2014.

Thirty PHM areas each were randomly selected from eleven (11) coastal MOOH areas and another 30 PHM areas were randomly selected from nine (9) inland MOOH areas in Galle district. Culex quinquefacsiatus mosquito pools were collected from these areas and subjected to PCR to determine Wucheraria bancrofti parasite DNA. Result of this survey is given in Table 5.2.11.

Table 5.2.9 : Results of Molecular Xenomonitoring Surveys for Wuchereria bancrofti DNA in Mosquitoes in Two Evaluation Units in Galle District, Sri Lanka

	MOH Area	No. of Mosquito Pools Collected	No. of Mosquito Pools Positive	Pools Positivity Rate (%)
Inland	1. Baddegama	141	-	-
	2. Welivitiya Divithura	48	-	-
	3. Imaduwa	80	6	7.50
	4. Niyagama	62	-	-
	5. Udugama/Nagoda	85	-	-
	6. Yakkalamulla	81	2	2.47
	7. Thawalama	50	-	-
	8. Neluwa	40	-	-
	Sub Total (Inland)	587	8	1.36
Coastal	9. Gonapinuwala	17	-	-
	10. Hikkaduwa	71	8	11.27
	11. Bope Poddala	44	2	4.55
	12. Ambalangoda	69	7	10.14
	13. Balapitiya	68	26	38.24
	14. Karandeniya	48	-	-
	15. Induruwa	45	4	8.89
	16. Akmeemana	93	18	19.35
	17. Galle	60	16	26.67
	18. Habaraduwa	39	11	28.21
	19. Elpitiya	73	-	-
	Sub Total (Coastal)	627	92	14.67
Grand Total (Inland and Coastal)		1,214	100	8.24

5.2.3.9.5 Special Surveys in Mannar District (Non Endemic)

Special entomological and Wucheraria bancrofti antigen surveys were conducted in Mannar district in 2014. Antigen tests (ICT) for Wucheraria bancrofti were done among 800 persons. Twenty two (22) Culex quinquefaciatus mosquito pools (20 mosquitoes per pool) were subjected to PCR and 23 mosquitoes were dissected.

Table 5.2.10 : Results of the Antigen Tests (ICT) for *Wucheraria Bancrofti* in Mannar District in 2014

MOH Area	PHI Area	No. of Persons Tested	No. of Persons Positive	Antigen Rate (%)
Mannar	Erukkalampiddi	110	-	-
Mannar	Mannar Town	328	2	0.61%
Musali	Chilawathurai	201	-	-
Musali	Arippu	161	-	-
Sub Total		800	2	0.25%

Results of this survey are in Tables 5.2.12 and 5.2.13.

Table 5.2.11 : Results of Entomological Survey in Mannar District in 2014

MOH Area	PHI Area	No. of Mosquitoes Collected	No. of Mosquito Pools for PCR	No. of Mosquito Pools Positive	No. of Mosquitoes Dissected	Infected Rate
Mannar	Erukkalampiddi	40	2	0	-	-
Mannar	Mannar Town	320	16	0	-	-
Musali	Chilawathurai	80	4	0	-	-
Musali	Arippu	23	-	-	23	0.00%
Sub Total		463	22	0	23	0.00%

5.2.3.9.6 Mass Drug Administration in Galle District

Whilst the district data in endemic areas showed low mf rates, routine and special survey data in some Medical Officer of Health (MOOH) areas in Galle district showed higher mf rate, antigen rate and mosquito positivity. With the recommendation of the Technical Advisory Group for National Lymphatic Filariasis Elimination Programme, Anti Filariasis Campaign of Ministry of Health decided to give the Mass Drug Administration (MDA) programme in fourteen MOOH areas (Akmeemana, Ambalangoda, Balapitiya, Bope-Poddala, Elpitiya, Galle MC, Gonapinuwala, Habaraduwa, Hikkaduwa, Rathgama, Induruwa/Bentota, Baddegama, Imaduwa and Yakkalamulla) out of 20 MOOH areas in Galle district during 2014 and 2015 considering mf positivity in the area or geographically locating closer to a mf positive MOOH area with the assistance of the health authorities and public health staff of the district.

Residents in these 14 MOOH were given a single dose of Diethyl carbamazine citrate (DEC) tablets and one 400mg tablet of albendazole each. It has shown that the annual single-dose co-administration of two drugs (DEC and albendazole) reduces blood microfilariae by 99% for a full year. Hence it is important to co-administer these two drugs regardless of recent intake of anti-helminthic treatment among persons in the area. This treatment is not given to: pregnant mothers; children less than 2 years of age; mothers breast feeding to a child less than two years of age; acutely ill persons.

Reported epidemiological drug coverage in 2014 in 14 MOOH areas in Galle district was 72.72%. Study will be conducted in randomly selected MOOH areas to assess the consumption coverage.

5.2.4 Anti Leprosy Campaign

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, Batticaloa.

The first effective chemotherapy, Dapsone was introduced in late 1940s; however, this monotherapy became ineffective by 1960s due to emergence 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 and control activities, etc.

The islandwide 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 hither to 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 Plan of Action 2014 – 2017

National action plan for control of leprosy 2014 - 2016 was prepared following a series of workshop based on the national strategic plan and implemented through a model leprosy programme in five districts.

5.2.4.4 Vision of the Programme

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

5.2.4.5 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.

5.2.4.6 Specific Objectives

1. To reduce the rate of new cases with grade 2 deformities down to 4% at the end of 2015, compared to the baseline value of 8% at the end of 2010
2. To increase early detection rate (less than 6 months of the onset of symptoms) to 75% from the current rate of 44%
3. To improve treatment completion rates up to 90% 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

5.2.4.7 Current Status

From 2003 - 2014 it was observed that the new case detection rates were fluctuating around 10 per 100,000 population. There is a slight increase in trend in new case detection rates from 9.14 in 2009 up to 10.4 in 2014. The number of new leprosy cases detected in 2014 was 2,211. The reported prevalence at the beginning of 2014 was 0.7 per 10,000 population.

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.

Even though the large number of patients are reported from Colombo, the new case detection rates for 2014 was highest for Polonnaruwa district of 19.1 followed by Kalmunai and Ampara district rates of 19.1 and 18.63 respectively. Lowest new case detection of 0.87 reported from Kilinochchi.

Percentage of patients with Grade 2 deformity has showed a downward trend from 2001 has increased to 7.88 percent in 2014. Highest number of patients with grade 2 has found from Colombo in 2014.

Fig 5.2.17 : New Case Detection Rates of Leprosy per 100,000 Population, 1990 – 2014

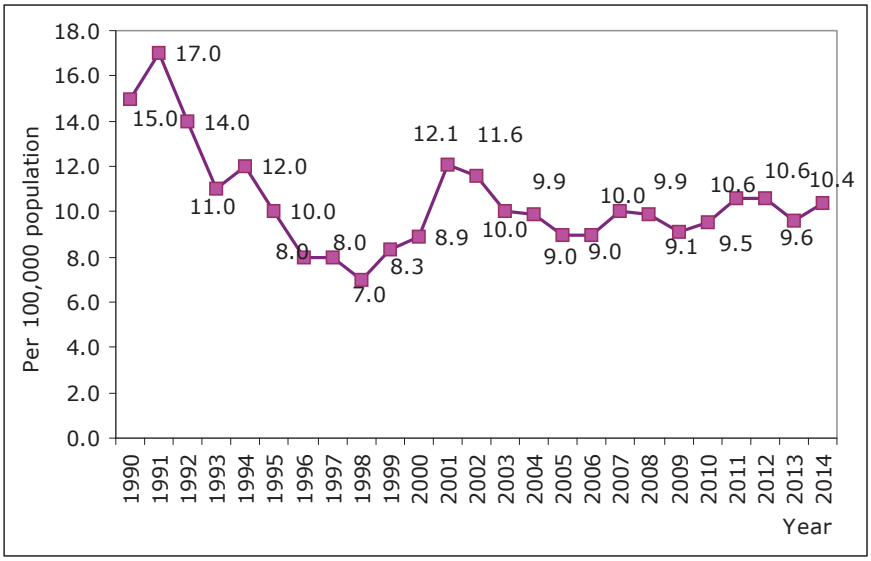


Fig 5.2.18 : Number of New Leprosy Cases by District, 2014

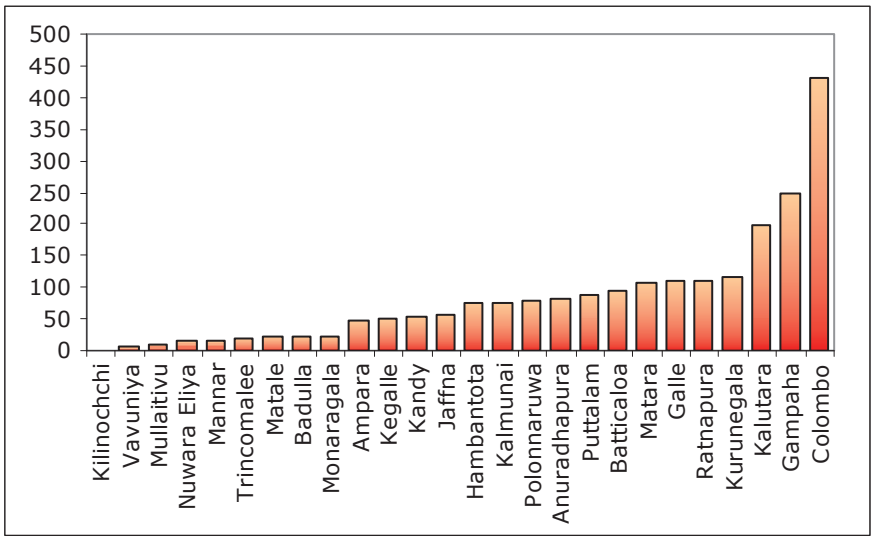
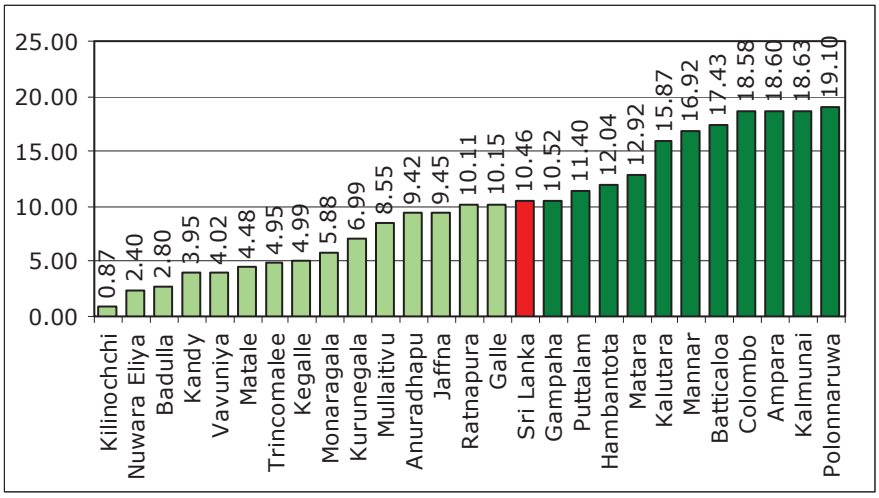


Fig 5.2.19 : New Case Detection Rates by District per 100,000 Population, 2014



Child rates have been fluctuating around 10% from 2001 to 2014 and was 10.39 in 2014. However there is a reduction of child rates reported in 2012 to 7.64 but again in 2013 and 2014 it was increased to 9.17 and 10.39 respectively. Child case rates have remained high indicating active transmission in districts such as Colombo, Kalutara and Gampaha.

MB rates are increasing gradually over the past 10 years and have a rate of 51% in 2014.

5.2.4.8 Major Achievemnets in 2014

Model Leprosy Control Programme initiated in five districts including Colombo, Gampaha, Hambanthota, Ampara and Puttlam in line with National Action Plan for leprosy; control of leprosy 2014 – 2016. Leprosy Post Exposure Prophylaxis pilot study preparation has been started.

Media semminar was conducted as the national programme to increase public awareness through mass media in 2014 along with district programmes to celebrate the World Leprosy Day. Signed a Memorandum of Understanding with FAIRMED Foundation for implementation of model leprosy programme in five districts. Initiated a island wide community screening programme in high endemic districts of leprosy as a new strategy to improve new case detection.

Fig 5.2.20 : Grade 2 Disability Rates among Leprosy Patients in Sri Lanka, 2001 - 2014

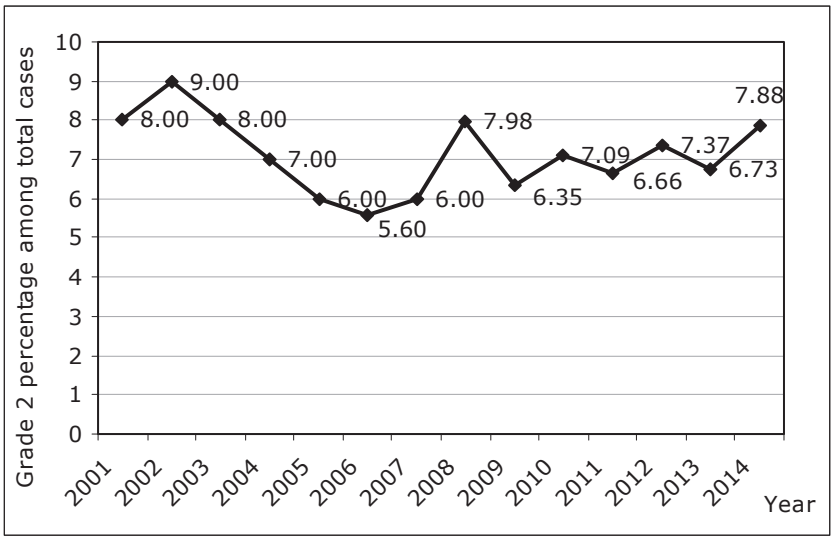


Fig 5.2.21 : Child Rates among Leprosy Patients in Sri Lanka, 2001 - 2014

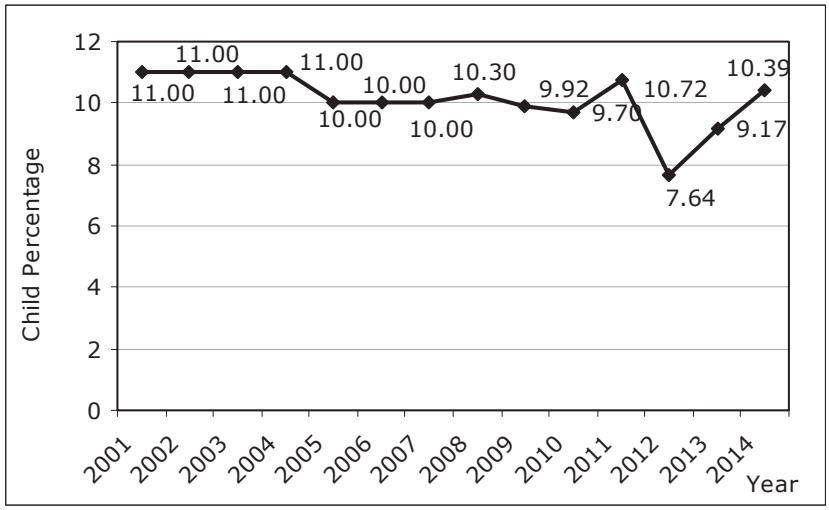


Fig 5.2.22 : Multi Bacillary (MB) Rates, 2001 - 2014

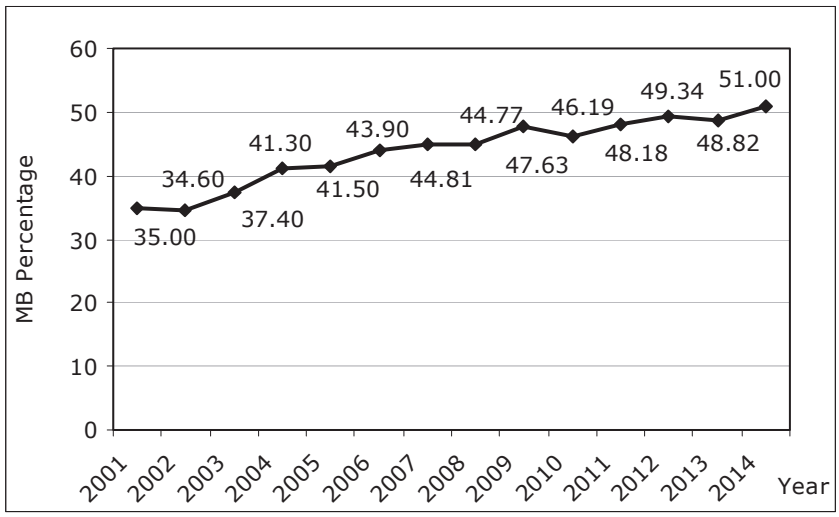


Table 5.2.12 : Basic Indicators in Leprosy

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
2013	9.6	48.8	9.2	6.7
2014	10.4	51.0	10.4	7.9

Table 5.2.13 : Epidemiological Profile of Leprosy by Province, 2014

Province	Population	Leprosy cases		New case detection rate	Multibacillary		Child		Grade 2 deformity	
		New cases	%		Cases	%	Cases	%	Cases	Rate for 100,000 population
Central	2,590,696	98	4.54	3.78	48	48.98	16	16.33	11	0.42
Eastern	1,578,342	251	11.64	15.9	118	47.01	39	15.54	15	0.95
Northern	1,075,976	97	4.5	9.02	48	49.48	10	10.31	9	0.84
North Central	1,295,022	174	8.07	13.44	85	48.85	12	6.9	15	1.16
North Western	2,417,540	211	9.78	8.73	115	54.5	14	6.64	19	0.79
Sabaragamuwa	1,948,677	169	7.83	8.67	102	60.36	12	7.1	15	0.77
Southern	2,508,743	298	13.82	11.88	136	45.64	23	7.72	19	0.76
Uva	1,280,738	47	2.18	3.67	32	68.09	2	4.26	3	0.23
Western	5,928,104	936	43.39	15.79	416	44.44	96	10.26	64	1.08

5.2.5 Public Health Veterinary Services (Rabies Control Programme)

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). Worldwide 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.

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 in the country. The two major enactments, the Rabies Ordinance of 1893 and the Dog Registration Ordinance of 1904 are clear evidence to prove that rabies had been identified as a problem during this period.

Although the official statistics are not available to gauge the rabies situation prevailed in the country until 1970s, the existing records indicate that rabies had been recognized as an important public health problem in Sri Lanka from early 1950s.The government has been concerned about the rabies menace over the decades and Public Health Veterinary Services (PHVS) of the Ministry of Health (MoH) was established in 1953 to entrust the rabies control programme in the country.

Presently, 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.

The programme had been decentralized since 1990. Provincial health services are responsible for implementation of the programme. The central programme provides technical support and guidance for the successful implementation of control activities at district level.

National strategic plan was developed targeting human rabies elimination by the year 2020 and new strategies were introduced. Partnership collaboration with different ministries was identified as a major strategy under one health approach.

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 whilst 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 carried out by both line ministry and provincial hospitals.

5.2.5.7 Milestones in 2014

5.2.5.7.1 Survey on Dog Population Size and Structure

Dog population survey which was initiated in four identified divisional secretary areas was completed in 2014. This survey could be identified as a major milestone as it was conducted after 1996. It was found that estimated human to total dog population ratio was 6.7:1 and human to domestic dog population ratio was 9.6:1. The tabulated household dog vaccination coverage was 69%. Total dog vaccination (including stray dogs) coverage was 48%.

5.2.5.7.2 Dog Vaccination by Department of Animal Production and Health

As a milestone of implementation of one health strategy, the sole responsibility of dog vaccination in 17 identified MOH areas was granted to DAPH.

5.2.5.7.3 Revision of Post Exposure Treatment (PET) Circular

Initial workshops aiming PET circular revision were conducted with the participation of Consultant Virologists. Finalization of the new circular was scheduled for the year 2015.

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 19 in 2014 (Table 5.2.16). There is a remarkable reduction in human rabies deaths in 2014 compared to 2013 (28). Number of districts with no cases was 14 (figure 5.2.19) while in 2013 it was nine. Comparative reduction in human rabies deaths could be the result of combined strategies implemented towards dog rabies control as well as human rabies control.

Out of 19 human rabies deaths 84% (16) is male while 16% (3) is females. Majority, 74% (14) of them are in the socio economically active age group of 15- 60 years, 11% is in the age group of <15 years and 15% in the group of >60 years.

Mainly the dogs have transmitted the disease to humans. Dog was responsible for 84% (n=16) of human rabies deaths investigated in 2014. Of the 16 deaths caused by dogs, 13 (81%) were stray dog bite while 3 (19%) were domestic dog bite.

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 2014 was 746. Majority 81.7% (610) of animal rabies was reported among dogs, 15.4% (115) cats ,0.8% (6) cows, 0.5% (4) goats, 0.5% (4) mongoose and 0.26% (2) each among squirrels and buffaloes. One case (0.1%) each from rock squirrel, pole cat and pig was reported.

5.2.5.10 Achievements in 2014

- It was possible to maintain human rabies free status in 14 districts namely; Kegalle, Polonnaruwa, Matale, Nuwara Eliya, Matara, Hambantota, Badulla, Jafna, Vavuniya, Killinochchi, Mannar, Trincomalee, Ampara and Kalmunai districts. (Table 5.2.14, Figure 5.2.23)

- Human rabies deaths in 2014 were contained to 19 (28 in 2013).
- In the year 2014 it was possible to sterilize 134,943 dogs surgically and 18,664 dogs chemically.
- 1,533,032 stray and domestic dogs were vaccinated in year 2014. (Table 5.2.15)
- Participated for seven exhibitions island wide. Nearly 75,000 leaflets were distributed. Nearly 48,000 students and 1,500,000 adults were educated on rabies control.
- In 2014, 311,255 human rabies vaccine vials were provided for human rabies prevention.
- In year 2014, 105,487 serum (ERIG) vials and 8,396 human serum (HRIG) vials were provided for human rabies prevention.
- 48 Training programmes for curative health staff, an in-service training programme for District Rabies Control PHII and six training programmes on "One Health Approach" with the participation of district health and veterinary staff were conducted.
- 70,000 Pigs were vaccinated against japanese encephalitis infection in high endemic districts.

Fig 5.2.23 : Human Rabies Deaths Distribution by Districts

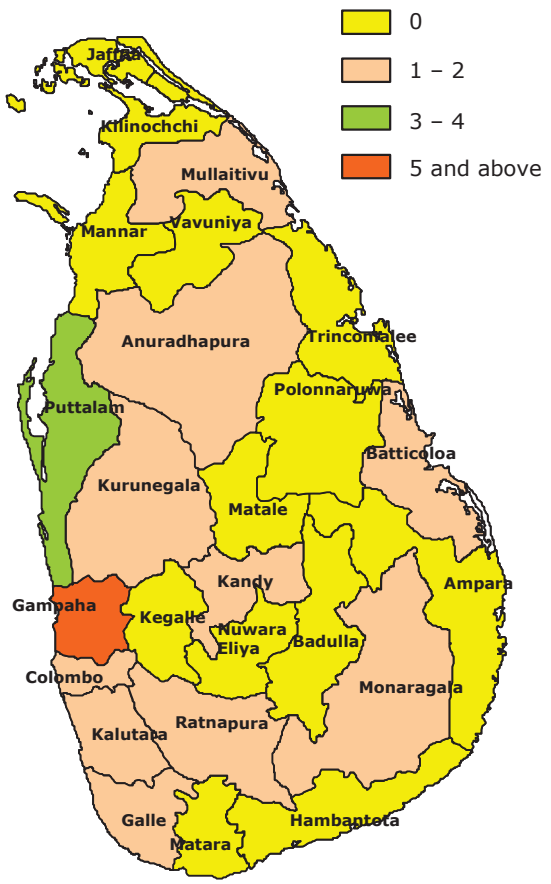
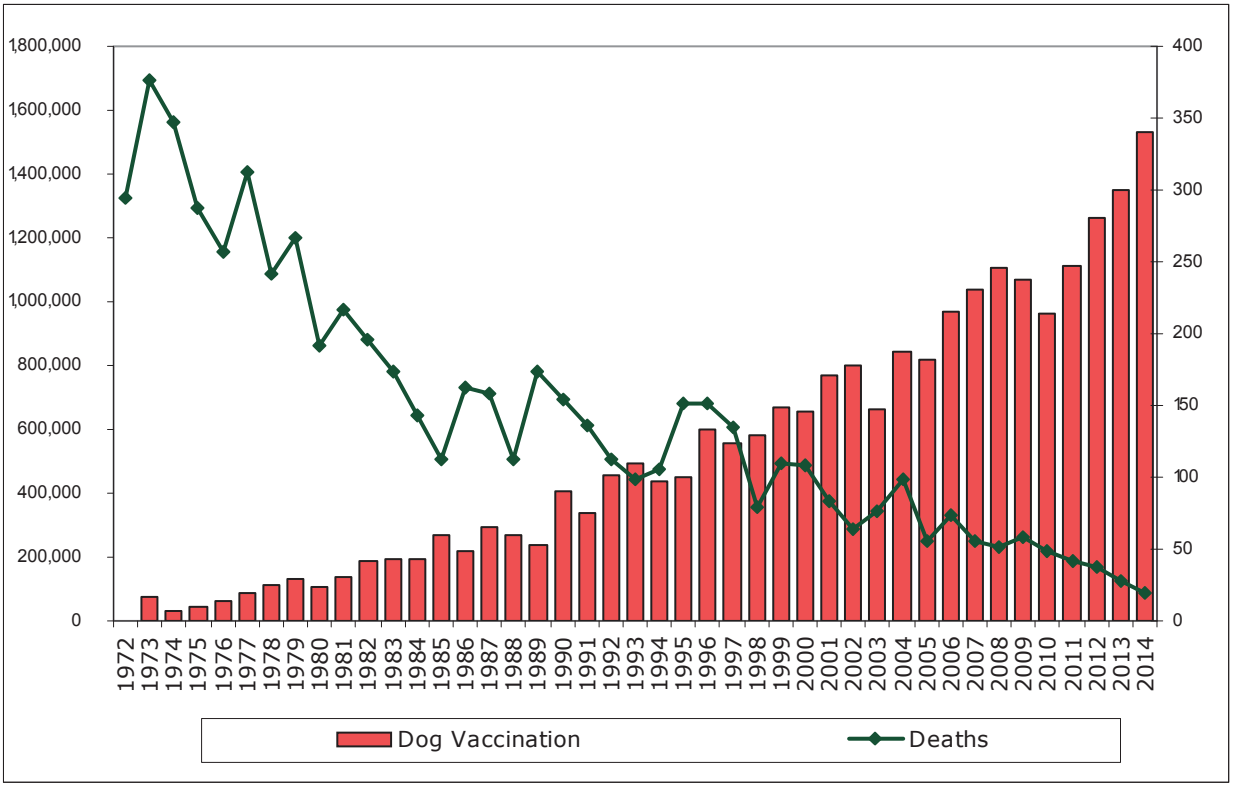


Fig 5.2.24 : Human Rabies Deaths and Dog Rabies Vaccination, 1972 - 2014



5.2.5.11 Control of Japanese Encephalitis (JE)

This programme was implemented in collaboration with the Department of Animal Production and Health. During 2014, seventy thousand (70,000) pigs were vaccinated against JE. Vaccines were provided by Health Services and Department of Animal Production and Health provided the human resources.

Table 5.2.14 : Human Rabies Deaths Distribution by Districts

District	2007	2008	2009	2010	2011	2012	2013	2014
Ampara	0	0	1	1	0	2	0	0
Anuradhapura	4	3	6	4	1	2	3	1
Badulla	0	1	1	0	0	1	0	0
Batticaloa	6	7	6	5	8	4	4	1
Colombo	1	0	7	2	2	6	1	1
Galle	5	5	6	5	4	0	2	1
Gampaha	8	7	8	6	7	2	1	5
Hambantota	2	1	0	0	2	0	0	0
Jaffna	1	0	5	2	1	1	2	0
Kalutara	5	2	3	3	1	2	0	1
Kalmunai					1	1	0	0
Kandy	2	2	1	1	0	0	0	1
Kegalle	0	1	1	0	0	0	0	0
Kilinochchi	2	0	0	2	2	1	1	0
Kurunegala	8	11	4	3	4	4	1	1
Matale	2	0	1	1	0	2	0	0
Matara	2	1	1	0	1	4	2	0
Mannar	1	1	0	1	0	0	0	0
Monaragala	2	2	2	4	2	2	2	1
Mullaitivu	0	1	0	1	0	0	1	2
Nuwara Eliya	1	1	0	0	1	0	0	0
Polonnaruwa	0	0	0	0	0	1	1	0
Puttalam	0	5	1	1	2	2	2	3
Ratnapura	3	0	2	3	1	3	2	1
Trincomalee	1	0	1	2	1	0	1	0
Vavuniya	0	0	0	2	0	1	2	0
Grand Total	**56**	**51**	**58**	**49**	**49**	**41**	**28**	**19**

Table 5.2.15 : Trends in Rabies Control Activities and Human Deaths from Rabies

Year	Dog Vaccination	Elimination of Dogs	Dog Heads Examined at MRI		Human Rabies Deaths	
			Number	Out of the total dog heads Examined , Positive	Number	Rate per 100,000
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	69.0	83	0.4
2002	797,565	117,790	670	71.0	64	0.3
2003	664,493	83,350	897	60.0	76	0.4
2004	843,906	89,530	1,105*	58.0	98	0.5
2005	818,162	62,675	472**	42.6	55	0.3
2006	971,442	12,791	788***	55.3	73	0.4
2007	1,037,617	-	659	659.0	56	0.3
2008	1,103,258	-	681	61.9	51	0.25
2009	1,068,036	-	709	65.8	58	0.29
2010	961,626	-	658	46.4	49	0.24
2011	1,115,399	-	922	59.4	41	0.20
2012	1,260,981	-	909	66.9	38	0.19
2013	1,350,561	-	973	68.0	28	0.14
2014	1,533,032	-	746	54.7	19	0.09

* The new laboratory at Galle started functioning.

** Galle laboratory was washed away by the tsunami.

*** Recommence of Galle laboratory

Table 5.2.16 : History of Human Rabies and Control Activities

Year	Deaths	Dog Vaccination	Dog Elimination	Chemical Sterilization	Surgical Sterilization
1972	295	-	-	-	-
1973	377	75,386	3,128	-	-
1974	347	31,617	312	-	-
1975	288	42,252	1,608	-	-
1976	257	60,932	2,223	-	-
1977	312	85,798	278	-	-
1978	241	111,289	7,986	-	-
1979	266	130,070	22,431	-	-
1980	191	105,287	35,156	-	-
1981	216	135,266	37,633	-	-
1982	196	189,600	48,353	-	-
1983	174	194,146	42,237	-	-
1984	143	195,696	62,962	-	-
1985	113	268,561	58,238	-	-
1986	163	216,243	73,750	-	-
1987	158	293,603	88,919	-	-
1988	113	268,717	55,803	-	-
1989	173	236,728	47,175	-	-
1990	154	408,086	63,233	-	-
1991	136	336,052	100,340	-	-
1992	112	453,891	96,861	-	-
1993	98	491,871	112,098	-	-
1994	105	435,204	105,133	-	-
1995	151	452,828	106,862	-	-
1996	152	603,108	114,337	-	-
1997	135	553,468	91,215	-	-
1998	79	578,825	129,773	-	-
1999	110	667,270	106,699	-	-
2000	109	657,597	117,790	-	-
2001	83	770,375	119,761	-	-
2002	64	797,565	96,202	-	-
2003	76	664,993	84,350	-	-
2004	98	844,123	89,530	-	-
2005	55	818,162	62,675	5,651	244
2006	73	971,442	12,791	46,968	1,419
2007	56	1,037,617	-	102,031	4,088
2008	51	1,103,258	-	85,339	119,816
2009	58	1,068,036	-	53,931	220,280
2010	49	961,626	-	39,999	93,656
2011	41	1,115,399	-	54,345	106,002
2012	38	1,260,310	-	49,989	116,154
2013	28	1,350,561	-	36,372	163,852
2014	19	1,533,032	-	18,664	134,943

5.2.6 Directorate of Youth, Elderly, Disabled and Displaced Persons

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

5.2.6.1 Elderly Health Care

5.2.6.1.1 Vision

Healthy, active and productive elderly population.

5.2.6.1.2 General Objectives

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

5.2.6.1.3 Activities (Activities completed in 2014, out of ongoing activities till end of 2015)

1. Developed infrastructure facilities to improve elderly/disability care in Jaffna Teaching Hospital, Batticaloa Teaching Hospital and Ragama Rheumatology and Rehabilitation Hospitals.
2. Established elderly friendly health care units in General Hospital-Hambantota, General Hospital-Nuwara Eliya and Teaching Hospital-Karapitiya.
3. Conducted a pre-retirement advocacy programme on healthy aging for officers attached to Ministry of Health.
4. Conducted a consultative meeting on module development for healthy aging.
5. Conducted seminar to promote active ageing for all MOHs in the country.
6. Conducted an awareness programme on elderly health care for officers attached to Ragama, Galle, Ratnapura, Matara, Kurunagala hospitals.
7. Conducted an accessibility regulations awareness programme for medical officers.
8. Conducted a training programme for care givers.
9. Developed elderly care service delivery training module and information & educational material.
10. Conducted an awareness programme on elderly health care for people at Nildandahinna, Ragala and Walapane areas in Nuwara Eliya district on 15th and 16th December, 2014.
11. Conducted multi stakeholders' advisory committee meeting on elderly care.
12. Conducted lectures for undergraduates and postgraduates on health of elderly in collaboration with universities.
13. Conducted Training of Trainers (ToT) programme for carers of elders. Promoted awareness on 'Healthy Aging' for different target groups.
14. Conducted advocacy programmes to promote elders' and youngers' good relationships.
15. Conducted activities to commemorate International Elders Day - 01st October
16. Promoted research on elderly by providing research forum to share information.
17. Under the vision of 2020 programme, free distribution of spectacles and facilities to have free cataract surgeries and lenses for elders.
18. Advocacy program to act elders as resources for youth.
19. Inspection of elderly home activities including PHI manual.
20. Conducted multi stake holders meeting to develop elderly health care policy which is planned to be formulated in the future.

5.2.6.2 Youth

5.2.6.2.1 Vision

Healthy & productive youth population.

5.2.6.2.2 General Objectives

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

5.2.6.2.3 Specific Objectives

- To improve the capacity of the health staff on youth friendliness, promoting life skills among youth
- To implement programme 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 (YFHS) in the country with the support of the central and provincial health authorities
- Monitoring and evaluation of Youth Friendly Health Services (YFHS) in the country

5.2.6.2.4 Activities (Activities completed in 2014 , out of ongoing activities till end of 2015)

1. Proposed wider forum to finalize youth health policy prior to cabinet approval.
2. Conducted sensitization of health care providers attached to selected base hospitals on functions of YFHS services.
3. Conducted sensitization programme for officers attached to YFHS centers.
4. Conducted life skills training programme for officers attached to YFHS centers.
5. Conducted life skills training programme for officers attached to Chest Hospital Welisara, Ragama.
6. Conducted life skills training programme for students of Co-operative Hospital in Kurunagala.
7. Advocacy program to act elders as resources for youth.
8. Launching of the Youth Health Policy.

5.2.6.3 Disability Health Care

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 Objectives

- To improve quality health care on disability and rehabilitation.
- To improve multistakeholder network on disability health care and rehabilitation.
- To promote awareness on prevention of disability.
- To strengthen implementation of national action plan on disability. (Thematic area 2)

5.2.6.3.4 Activities (Activities completed in 2014 , out of ongoing activities till end of 2015)

1. Develop rehabilitation services and facilities in Kurunagala and Kalubovila Hospitals.
2. Printed, "National Guidelines for Rehabilitation Services in Sri Lanka", 1000 number of booklets and delivered.
3. Conducted a steering committee meeting on people with disability.
4. Conducted accessibility regulations awareness programme for head of health institutions.
5. Conducted a training of trainers programme of sports disability prevention.
6. Developing information systems on disability health care.
7. Conducted an accessibility regulations awareness programme for medical officers working in Gampaha District.
8. Conducted a training programme for care givers.
9. Conducted a training of trainers programme on caring of disabled elders.
10. Conducted consultative meeting on National Guidelines for Rehabilitation Services.
11. Conducted multistake holders consultative meeting for integration of National Spinal Cord Injury Management Programme.
12. Conducted awareness programme for parents of disabled children.
13. Conducted community awareness programmes for the health staff in rehabilitation hospitals (Ragama, Digana, Kendagolla, Jayanthipura and Maliban rehabilitation hospitals) on disability health care and rehabilitation.
14. Commemorate of International Disability Day
15. Conducted lectures for undergraduates and post graduates on disability care.
16. Initiated work to establishment of rehabilitation units in regional hospitals.
17. Supported to establish stork units in Teaching Hospitals and General Hospitals.
18. Conducted programmes to improve awareness on accessibility to build conductive environment among health managers and other multi stake holders.
19. Conducted periodical review meetings with NGOs who provide rehabilitation care services in Sri Lanka.
20. Technical contribution of many organizations for people with disability.
21. Ongoing process to establish rehabilitation centers in underutilize regional hospitals.
22. Purchasing of logistics & materials for prosthetics & orthotics workshops.
23. Conducting consultative workshops to develop IEC materials for elderly and disable persons.
24. Conducted advocacy programme on accessibility regulations in both preventive and curative sector.
25. Capacity building of multi disciplinary health teams involved in disability health care and rehabilitation.

5.2.7 National STD/AIDS Control Programme (NSACP)

The National STD/AIDS Control Programme (NSACP) is a specialized public health programme of the Ministry of Health and responsible for coordinating, planning and implementation of the HIV National Strategic Plan and AIDS Policy in the country. As of end 2014, there were 30 full-time STD clinics and 22 branch STD clinics in the island. Of these,13 clinics had the capacity to provide Anti Retroviral Treatment (ART) services for people living with HIV.

Main functions of the NSACP consists of coordinating and participating in the national response to HIV epidemic, carrying out HIV prevention interventions, helping to create an enabling environment for STI and HIV prevention, provision of clinical services for sexually transmitted infections, provision of treatment and care for people infected and affected by HIV, provision of laboratory services for STI and HIV, condom promotion for STI and HIV prevention, provision of counselling services for STIs and HIV, prevention of mother to child transmission of HIV and syphilis, training and capacity building of health and non-health staff, carrying out HIV and STI surveillance, carrying out research in STI and HIV, carrying out, monitoring and evaluation of STI and HIV services and dissemination of strategic information on STI and HIV.

Services provided by STD clinics are utilized by variety of people including most at risk populations such as sex workers, MSMs and drug users, clients of sex workers, beach boys, prisoners and the general population.

The Fig 5.2.21 indicates the number of sexually transmitted infections reported for the year 2014. As seen in the figure, genital herpes was the commonest reported STI followed by non-gonococcal infections and genital warts.

5.2.7.1 HIV Epidemic in Sri Lanka

Sri Lanka has been categorized as a country with a low level HIV epidemic. In such a scenario, HIV case reporting and monitoring of HIV programmatic data plays a vital role in understanding the HIV epidemic in the country. The National STD/AIDS Control Programme (NSACP) has a HIV case notification system since the beginning of the HIV epidemic in Sri Lanka. HIV confirmatory test, (Western Blot or Line Blot) has been available only at the National Reference Laboratory of NSACP. This has greatly facilitated the HIV case notification system as all the screening positive HIV blood samples are sent to the NSACP laboratory for HIV confirmation.

Fig 5.2.25 : Number of Sexually Transmitted Infections in Sri Lanka, 2014

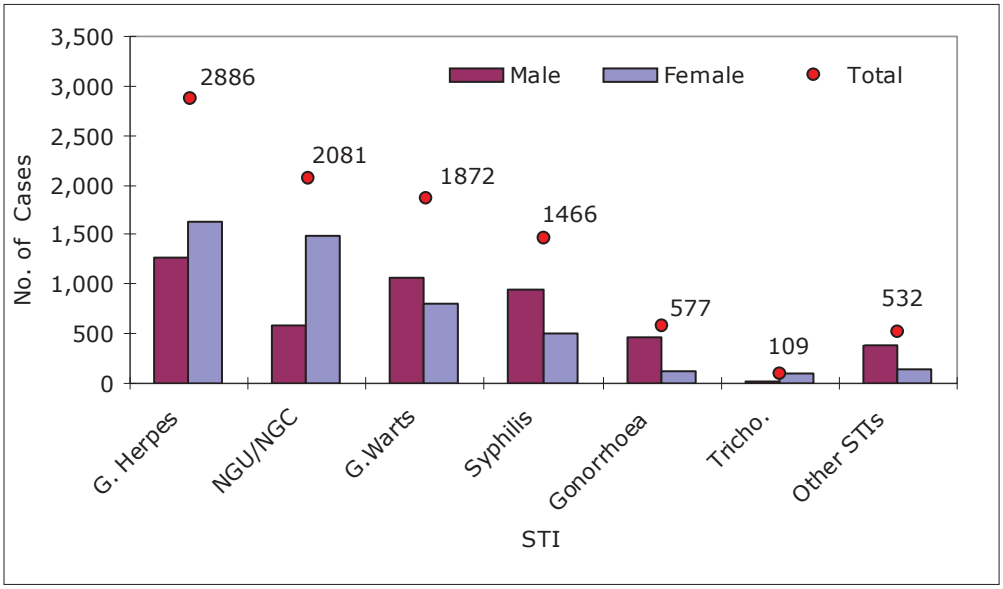
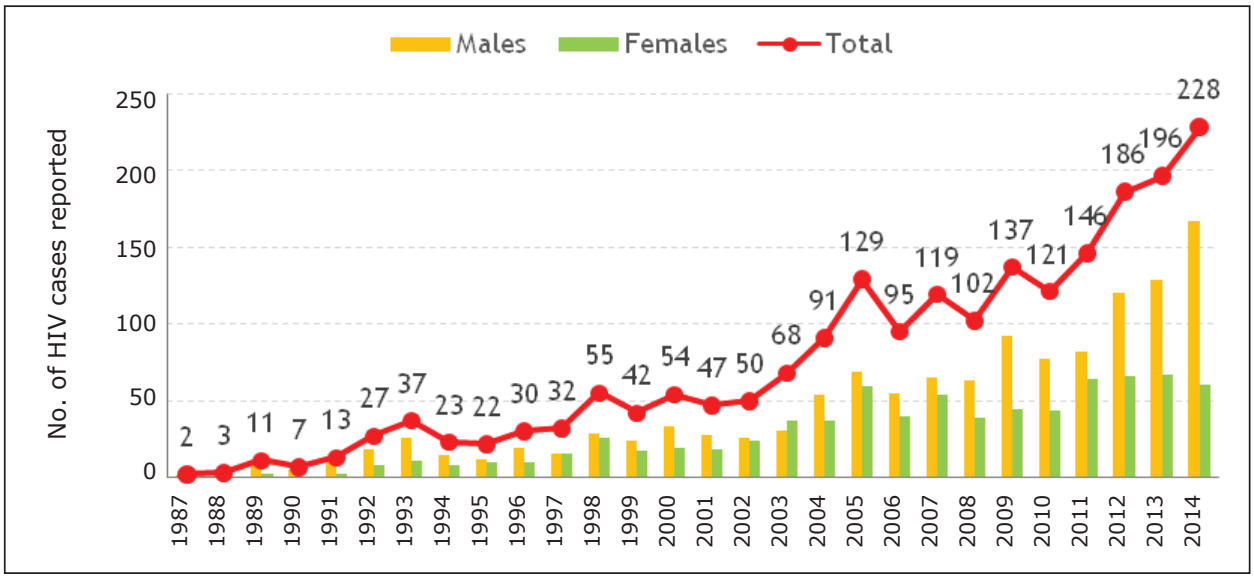


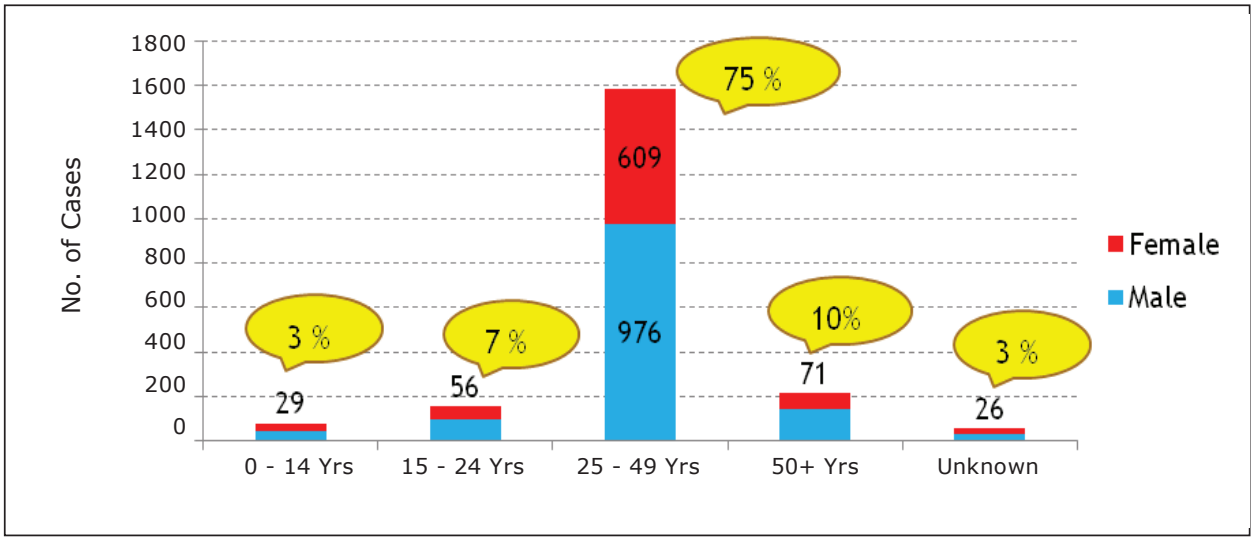
Fig 5.2.26 : Reported HIV Positives in Sri Lanka, 1987 - 2014



The first HIV positive Sri Lankan patient was reported in 1987. The above graph illustrates the number of HIV patients reported in each year up to the end of 2014. As end of 2014, there were 2,073 cumulative HIV positives reported to the National STD/AIDS control programme.

A rising trend of male-male or bisexual transmission among men has been observed over the years. There are no cases of HIV due to blood transfusions since the year 2000.

Fig 5.2.27 : Reported HIV Cases by Age Group, 1987 - 2014 (N= 2073)



Further analysis of reported HIV cases in Sri Lanka shows that majority (75%) of the infected people are in 25-49 year age group as shown in the above bar graph.

Majority of the transmissions took place due to male-female sexual contacts. Almost one third of HIV transmissions has been taken place due to male-male sexual contacts.

5.2.7.2 HIV Testing and Counselling (HTC)

National STD/AIDS Control Programme plays a leading role in the provision of HIV testing and counselling services in the country. Populations with risk behaviours attend public STD clinics for HTC services. In addition, attempt has been made to provide these services to most-at-risk populations through outreach activities.

Fig 5.2.28 : Probable Mode of Transmission of New HIV Cases in 2014 (N=228)

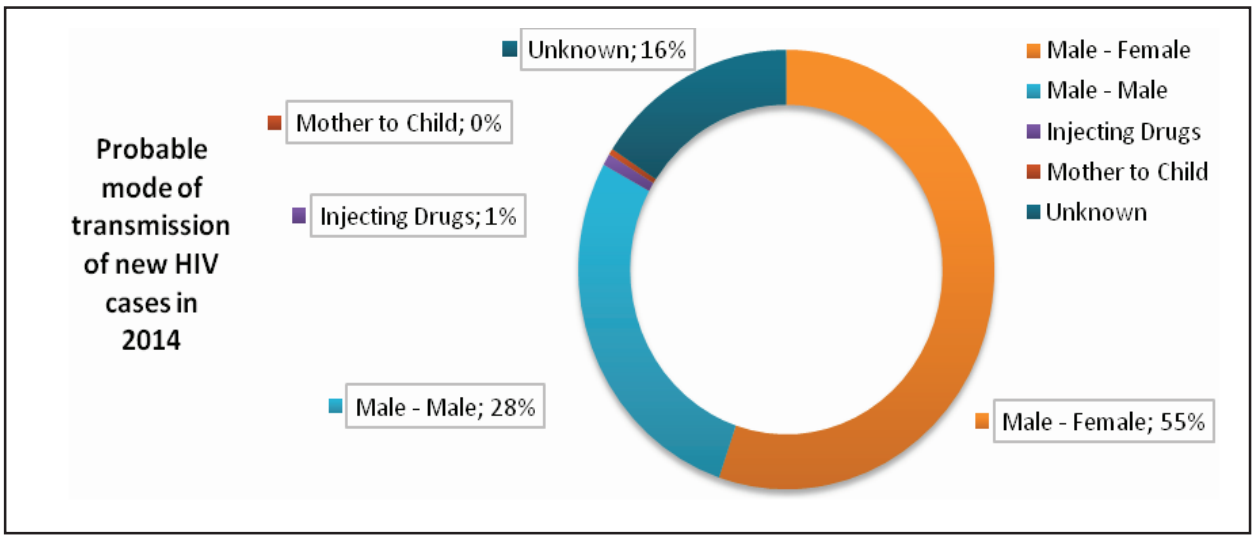


Table 5.2.17 : Details of Blood Samples Screened for HIV in 2014

Type of sample	Number tested	No. positive	Test positivity rate
Blood donor screening	380,367	25	0.01%
Private hospitals and laboratories	237,605	63	0.03%
Antenatal mothers	168,221	5	0.003%
STD clinic samples*	72,063	113	0.16%
Tri forces	20,191	0	0.00%
Prison HTC programme	13,803	4	0.03%
TB clinic screening	7,409	18	0.24%
Total	899,659	228	0.03%

* STD clinic samples include STD clinic attendees, testing symptomatic patients and testing of contacts

During the year 2014 a total of 899,659 blood samples have been tested for HIV. These tests were carried out at STD clinics, blood banks, hospitals of tri forces and private sector hospitals & laboratories. The highest HIV test positivity is seen among tuberculosis clinic attendees.

5.2.7.3 Anti Retroviral Treatment (ART) and Services for People Living with HIV

ART has been proven so successful that HIV has become a chronic disease in which progression to AIDS has become increasingly rare. National STD/AIDS control programme is the sole provider of ART in Sri Lanka as private sector healthcare institutions are not providing this service. At the end of 2014 there were 825 PLHIV in 13 ART centers.

5.2.7.4 The Programme for Elimination of Mother to Child Transmission of Syphilis and HIV

During the year 2014, antenatal HIV screening services were scaled up to cover Northern, North Central and North Western provinces. It is expected to cover the whole country by 2016. International funding agencies such as UNICEF, World Bank and WHO supported this programme.

As a result of revival of the programme for EMTCT of HIV and syphilis, the screening for syphilis among pregnant women in government STD clinics increased to 292,820 at the end of 2014. In the year 2014, 115 pregnant women were diagnosed as having syphilis. A total of 111 mothers could complete the treatment at the STD clinics and five cases of congenital syphilis have been reported and all of them belong to case definition 3. Number of samples tested for HIV among pregnant women increased from 17,000 in 2012 to 168,221 by the end of 2014. A total of 9 pregnant women were confirmed as having HIV infection.

Table 5.2.18 : Data Related to Mother to Child Transmission of HIV during 2014

Indicators on HIV positive pregnant women and their babies		Number
1.	Number of HIV tests done among pregnant women	168,221
2.	Number of pregnant women with HIV reported (4 known, 5 new cases)	9
3.	Number of HIV positive women who received PMTCT services	9
4.	Number of abortions among all pregnant women with HIV	2
5.	Number of live births among all pregnant women with HIV	7
6.	Number of babies born to HIV positive women who received ART prophylaxis	7
7.	Number of babies born to HIV positive women who received exclusive formula feeding (No babies received breast feeding)	7
8.	Number of HIV positive babies born to mothers who were tested with DNA PCR	7
9.	Number of DNA PCR test positives	0
10.	Number of previous pediatric HIV infections reported during the year	1

5.2.7.5 Laboratory Services

The laboratory services for HIV and STD in the country are provided by the National Reference Laboratory of NSACP and by district STD clinic laboratories linked in a network manner. Each peripheral STD clinic has their own laboratory situated within their clinic. The National Reference Laboratory of NSACP provides laboratory services to the Central STD clinic Colombo, Colombo group of hospitals, MOH areas in the Western province and functions as the reference laboratory to all the other peripheral STD clinics and private sector laboratories in the country. In addition to carring out tests at the laboratory, samples were sent to India for 19 DNA PCR tests for early infant diagnosis.

5.2.7.6 Condom Promotion

Condom promotion is an important strategy adopted by National STD/AIDS Control Programme (NSACP) to promote sexual health and well-being of people of Sri Lanka, as condoms are effective in the prevention of transmission of STIs and HIV in addition to its family planning usage. Around 3 million condoms were procured by the NSACP in 2012 through Global Fund round-9 HIV project for the use in years 2013 - 2014. These were distributed through STD clinics and through Family Planning Association and its sub-recipient NGOs to the high risk populations & other vulnerable population. Condom promotion among patients attending STD clinics is an essential part of preventive work that is carried out daily by health care providers within services.

5.2.7.7 Post Exposure Prophylaxis for HIV

Post-exposure prophylaxis for HIV refers to medications given to prevent HIV infection after exposure to potentially infectious material following occupational exposures in healthcare settings.

Anti retroviral drugs for PEP are now available in twenty eight (28) government hospitals and nine (9) STD clinics in the country and offered after counselling and according to guidelines issued by NSACP. The Central STD Clinic, Colombo offered PEP services to 257 healthcare workers during 2014. The source blood samples were tested for HIV using a WHO recommended rapid test followed by an ELISA. Of the 257 healthcare workers, 24 healthcare workers were given ART for post exposure prophylaxis.

5.2.7.8 Multi-Sectoral Collaboration

The multi-sectoral involvement (relevant ministries, departments and civil society organizations) is an essential task in HIV prevention. Prison sector HIV intervention programmes have been conducted with the objective of prevention of HIV/AIDS and other sexually transmitted infections among prison community in Sri Lanka. HIV testing promotion is one of the key functions of NSACP. Asero-positive rate of 0.03% for HIV among prison inmates has been detected in 2014.

Police sector HIV prevention programme is carried out with the objective of improving knowledge and attitudes with regard to HIV/AIDS and to develop positive attitudes toward condoms as a medical device which will create harassment-free law enforcement practices for sex workers.

Youth sector HIV prevention programme is based on the training module for island wide youth council officers and youth co-op officers. A total of 79 youth co-op trainers and 277 youth council officers were trained during 2014 to implement the HIV/STD programmes in their respective areas to handle youth for developing skills to prevent HIV/AIDS.

Armed forces HIV prevention programme helped to achieve a positive behavior change to improve knowledge and safe sexual behavior and promoted HIV testing among them.

Road construction sector HIV prevention programme was implemented to improve knowledge and attitudes on HIV/AIDS and safe sexual practices among workers in road section.

5.2.7.9 Dissemination of Strategic Information via Reports and Website

The annual report of NSACP is published since 2012. A softcopy of the 2014/15 publication can be downloaded at http://www.aidscontrol.gov.lk/web/index.php/en/resources/publications. In addition, NSACP disseminates data regularly via the official website www.aidscontrol.gov.lk. Significant number of public has sought specific information by emailing the email given in the website <info@aidscontrol.gov.lk>.

5.2.8 National Cancer Control Programme (NCCP)

5.2.8.1 Background Information

National Cancer Control Programme (NCCP) which was established in 1980 is the national focal point for prevention and control of cancers in the country. It is responsible for advocacy for policy formulation, development of strategies and implementation of the activities for cancer prevention and control at national level, monitoring and evaluation of programme activities including surveillance of cancers at all levels and facilitating research related to cancer.

NCCP coordinates with all cancer treatment centres, national level institutes (Eg. Family Health Bureau, Epidemiology Unit) and provincial health ministries to implement cancer control activities in Sri Lanka.

NCCP activities are conducted mainly using the government funds and are also supported by the World Health Organization (WHO), including the International Agency for Research on Cancer (IARC) and the World Bank through the Health Sector Development Project for improving facilities for cancer care and capacity building.

Cancer prevalence in Sri Lanka is estimated to be around 51,300 (within 5 years of diagnosis) in the country (Globocan estimates for 2012). The common sites of cancer among males are 'lip, oral cavity and the pharynx', 'trachea, bronchus and lungs', oesophagus, 'colon and rectum' and lymphoma and among females, breast, cervix uteri, thyroid gland, oesophagus and 'colon and the rectum'. A considerable proportion of cancer cases report to healthcare institutions for diagnosis and treatment in advanced stages of the disease, resulting in poor survival and high mortality rates. Cancer is still associated with a lot of fear and to a lesser extent stigma in the country.

The overall crude cancer incidence rate (CR) was 82.6 per 100,000 population and the Age Standardized Rate (ASR) was 87.5 per 100,000 population in 2009. The same ten cancer types had remained in the top ten positions since 2001.

5.2.8.2 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'

5.2.8.3 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'

5.2.8.4 Objectives

- Ensure primary prevention of cancers by addressing risk factors and determinants by improved public awareness and empowerment.
- 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.
- Ensure sustained and equitable access to diagnosis and treatment facilities for cancers.
- Ensure rehabilitation, survivorship and palliative care facilities for cancer patients and support to their care givers at all levels.
- Strengthen cancer information systems and surveillance to monitor the progress and to evaluate the outcomes of cancer control actions.
- Promote professional education of doctors, nurses, technicians and health workers to augment trained human resources.
- Promote research and utilization of its findings for prevention and control of cancers.

5.2.8.5 Targets for Oral Cancer to be Achieved by 2020

- To reduce the rate of increase of the Crude Incidence Rate of oral cancer by 25% from existing level (from 2005 to 2009) of 0.73 by the year 2020.
- To reduce oral cancer detected at stages III and IV by 12% by the year 2020 from the baseline level of 72% in 2007.

5.2.8.6 National Policy & Strategic Framework on Prevention & Control of Cancers, Sri Lanka

Public comments were obtained and incorporated to the draft document on 'Policy on Prevention & Control of Cancers' prepared through the process of multi stakeholder consultation. The draft policy was used as the main guiding document in further strengthening, prevention & control of cancers in Sri Lanka.

5.2.8.7 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, functions 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.

5.2.8.8 Cancer Prevention & Control Activities at Provincial Level

The provincial ministries of health function as the provincial focal point to implement cancer control activities.

In each district, with the leadership of RDHS, district cancer control committees are being established in parallel to the district NCD committees with the participation of MO/NCD, MO/MCH, RE, RDS, MOOH consultants in curative & preventive sector, etc. District level cancer control activities are planned, implemented and evaluated by this committee.

5.2.8.9 Major Achievements for Year 2014

Main activities of National Cancer Control Programme are listed below.

5.2.8.9.1 Primary Prevention

- Conducting public awareness activities related to prevention & control of cancers
- Upgrading the mobile exhibition units
- A social marketing campaigns to promote healthy life styles for the prevention of oral cancer - Radio spots and TV discussions
- Printing & distribution of a manual on oral cancer prevention and early detection (in Sinhala & Tamil languages) for primary health care workers
- Advocacy programmes for religious leaders on oral cancer prevention and early detection
- Training programmes on cancer prevention and early detection for school teacher trainees
- Printing & distribution of public education leaflets & posters on primary prevention & early detection of cancers

Table 5.2.19 : Printing and Distribution of Public Education Leaflets and Posters

Theme	Type of IEC Material	No. in each language	
		Sinhala	Tamil
Primary prevention	Leaflet	80,000	20,000
Early detection	Leaflet	80,000	20,000
Breast cancer	Leaflet	80,000	20,000
Oral cancer	Leaflet	80,000	20,000
Cervical cancer	Leaflet	80,000	20,000
World Cancer Day – on 'Dispelling Myths'	Leaflet	80,000	20,000
Primary prevention - for the year of '*Drug free society'*	Leaflet	75,000	
Smoking prevention & cessation - for the year of '*Drug free society'*	Leaflet	75,000	
Early detection of breast cancer	Poster	50,000	
Arecanut	Poster	40,000	10,000
New betel tray	Poster	20,000	
Oral cancer prevention theme	Poster	20,000	5,000
Oral cancer	Wall chart	24,750	5,250

5.2.8.9.2 Strengthening Early Detection of Cancers

√ Capacity building programmes for health care staff

Regular training of trainer programmes on cancer control and prevention were conducted through out the year.

(Eg. for district level programme managers – MO/NCD, MO/MCH, RDS, Medical officers of Health, Regional supervising public health nursing sisters (RSPHNO), Public health nursing sisters (PHNS), Tutor nursing sisters, etc.)

- √ Daily cancer screening clinics held at the National Cancer Early Detection Centre, Narahenpita
- √ Commemoration of the 'World Cancer Day' and the 'World Breast Cancer Awareness Month'
- √ Development and printing of "Trainer manual for training of trainer programmes" on cancer prevention and control. A total of 250 copies were printed and distributed.
- √ Distribution of 9 training mannequins on self-breast examination & clinical breast examination for nine provinces
- √ Strengthening early detection of cancers through the functioning of National Cancer Early Detection Clinic & mobile cancer screening clinics through out year 2014

Table 5.2.21 : Guidelines on Early Detection of Cancers

Theme	Target Group	No. of Copies Printed and Distributed		
		Sinhala	Tamil	English
Management of breast symptoms	Primary care doctors			7,000
Early detection of breast cancer	Primary healthcare workers	8,500	1,500	
Prevention and early detection of common gynaecological cancers	Primary care doctors			1,000

Table 5.2.20 : National Cancer Early Detection Clinic & Mobile Cancer Screening Clinics

Theme		Suwa Udana Clinics Organized by the Ministry	Other Mobile Clinics Attended through Invitation	National Cancer Early Detection Clinic	Total
No. of clinics held		19	73	242	334
Total no. of clinic attendees		1,015	3,546	3,041	7,602
Breast examination	No. examined	1,015	3,546	2,514	7,075
	No. of abnormalities detected	90	480	797	1,367
Vaginal examination	No. examined	356	1,806	1,080	3,242
	No. of abnormalities detected	46	219	107	372
Pap smears	No. of PAP smears taken	498	1,790	1,020	3,308
	No. of abnormalities detected			61	61
BP	No. BP checked	-	226	1,006	1,232
	No. with elevated BP	-		11	11
Oral examination	No. examined	1,015	3,546	2,226	6,787
	No. of abnormalities detected	7	70	103	180
Thyroid examination	No. examined	1,015	3,546	2,833	7,394
	No. of abnormalities detected	23	76	63	162
No. of referrals		83	341	488	912
No. of mammography done		-	-	344	344
No. of colposcopy done		-	-	13	13
No. of Trans Vaginal Screenings		-	-	46	46

- A digital colposcopy machine was purchased for cancer early detection centre of the NCCP for strengthening cervical cancer screening programme
- Eight master trainers were trained on colposcopy on cervical cancer & pre cancerous lesion management at Barshi, India by the International Agency for Cancer Research, WHO in collaboration with Barshi Cancer Hospital.
- Advocacy for primary prevention & early detection of cancers
- Commemoration of 'World Cancer Day' and 'World Breast Cancer Awareness Month' through advocacy meetings, health care worker trainings and community activities.

5.2.8.9.3 Diagnosis & Treatment of Cancers

- Colposcopy sessions were conducted at Cancer Early Detection Centre, Narahenpita
- Consultant Oncologists & Consultant Oncosurgeons were actively involved in conducting district level training of trainer programmes which were conducted nationally & regionally

5.2.8.9.4 Rehabilitation, Survivorship & Palliative Care

√ Advocacy

Advocacy programme was conducted to commemorate 'International Cancer Survivors Day' on 2nd June, 2014 & 'International Palliative Care Day' on 2nd October, 2014 in collaboration with Sri Lanka Medical Association.

√ Capacity building on palliative care

a) Master trainer programme

Asia Pacific Hospice & Palliative Care Network (APHN), National Cancer Institute, Maharagama and National Cancer Control Programme, Sri Lanka signed a Memorandum of Understanding to commence the master trainer programme (Lien Collaborative for Palliative Care - 6 weeks programme) to develop capacity & leadership in palliative care in Sri Lanka. The first and second modules of master trainer programme were conducted from 24th to 28th March, 2014 and 1st to 5th December, 2014 respectively at the National Cancer Institute, Maharagama.

A total of 50 master trainers comprising of medical consultants, medical officers, nursing tutors & nursing officers, a psychologist and a senior instructor in social work participated.

b) Six weeks certificate course on palliative care

One medical officer (MO-oncosurgery, PGH Rathnapura) and three nursing officers (NO-National Cancer Institute, NO-DGH Gampaha, NO-Cancer Unit, PGH Rathnapura) followed the 6 weeks certificate course on palliative care at Trivandrum Institute of Palliative Sciences (TIPS), WHO Collaborating Centre for Training & Policy on Access to Pain Relief, Trivandrum, India. Shanthi Foundation, Australia sponsored this activity through NCCP.

c) Certificate course on community based palliative care

This programme was conducted for doctors and nurses on 14th & 15th July, 2014 with international resource persons. Shanthi Foundation, Australia sponsored the international resource persons. WHO Biennium 2014 – 2015 allocations were utilized for conducting this certificate course at Hector Kobbekaduwa Agrarian Research.

d) Care giver empowerment

Care giver empowerment was identified as a major step in strengthening palliative care in community level. Educational leaflet was developed in both Sinhalese (20,000) and Tamil (5,000) language. The leaflet was distributed through the cancer treatment centres.

e) Strengthening the social services support for cancer patients

Communications were being continued with Director, Social Servicers of Ministry of Social Services to strengthen the social services support for needy cancer patients. A one-day training programme was conducted for all district social services officers on 15th July, 2014.

5.2.8.9.5 Cancer Surveillance

- Cancer incidence data of year 2008 was published.
- Cancer Surveillance Form (a summary sheet) was introduced to cancer treatment centres to facilitate surveillance of cancers.

5.2.8.9.6 Cancer Research

- Jointly conducted the first ever international conference on Arecanut, Smokeless Tobacco & OPMD/Oral cancer with the University of Peradeniya in August, 2014.
- Second annual cancer research seminar was conducted on 27th November, 2014 in collaboration with Sri Lanka Medical Association. In addition to 10 research papers, a guest lecture was delivered on "Recent trends in alcohol use & abuse in Sri Lanka" by Prof. S.T. Hettige (Senior Professor of Sociology, Department of Sociology, University of Colombo) at this seminar.
- National Cancer Control Programme in collaboration with National Cancer Institute conducted a one day research workshop for medical officers of oncology units on 13th November, 2014 at National Cancer Institute.
- National Cancer Control Programme in collaboration with Graduate Nurses' Foundation of Sri Lanka and Department of Health Sciences, Open University of Sri Lanka organized a workshop on "Promoting Cancer Research among Nursing Community" on 25th July, 2014 at the auditorium of Post Basic Nursing Training School. About 100 nurses participated to the workshop.

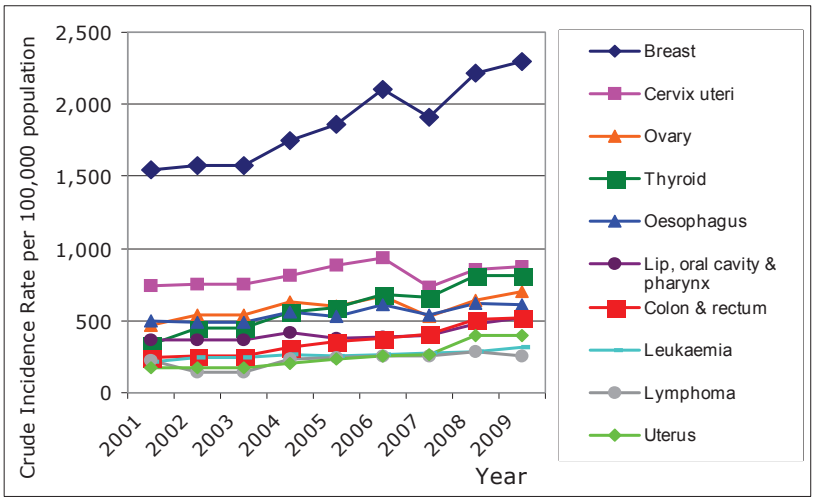
5.2.8.10 Trend from 2001 to 2009

Crude Incidence Rate is the number of new cancer cases detected per 100,000 population per year.

Table 5.2.22 : Number of New Cases Detected - Female

Cancer Site	2001	2002	2003	2004	2005	2006	2007	2008	2009
Breast	1,548	1,580	1,580	1,746	1,859	2,101	1,914	2,220	2,293
Cervix uteri	744	753	753	816	881	936	732	858	879
Ovary	466	539	539	627	596	671	529	637	698
Thyroid	337	451	451	555	592	683	656	815	816
Oesophagus	498	490	490	554	524	610	534	617	608
Lip, oral cavity & pharynx	369	364	364	414	377	390	398	477	520
Colon & rectum	245	258	258	310	353	372	405	508	517
Leukaemia	218	241	241	265	257	267	275	285	310
Lymphoma	223	144	144	230	243	257	257	288	252
Uterus	168	177	177	201	237	251	263	397	397
Total number of cases	5,901	6,351	6,445	7,009	7,314	7,875	7,279	8,816	9,030

Fig 5.2.29 : Leading 10 Cancer Sites of Females, 2001 - 2009

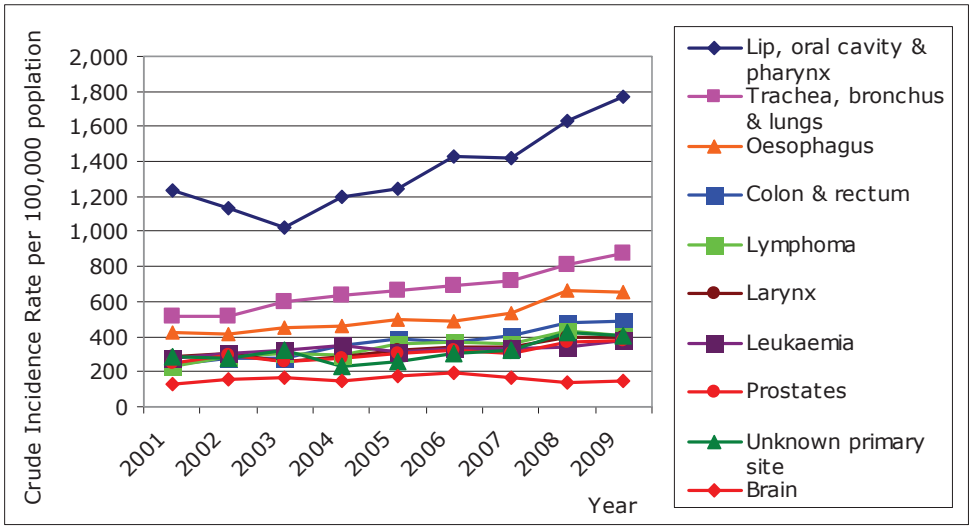


Criteria for inclusion of cases to the cancer register changed in 2007 to be on par with international standards.

Table 5.2.23 : Number of New Cases Detected - Male

Cancer Site	2001	2002	2003	2004	2005	2006	2007	2008	2009
Lip, oral cavity & pharynx	1,234	1,137	1,024	1,201	1,240	1,427	1,415	1,630	1,773
Trachea, bronchus & lungs	516	519	600	633	666	691	723	814	875
Oesophagus	420	416	449	461	498	486	530	664	656
Colon & rectum	241	280	278	354	388	371	409	477	489
Lymphoma	231	285	301	298	360	369	363	434	408
Larynx	284	303	262	290	324	341	343	393	393
Leukaemia	274	300	321	350	313	329	332	344	378
Prostates	250	297	259	273	303	321	305	369	381
Unknown primary site	282	276	319	232	257	303	326	423	404
Brain	131	153	163	147	171	196	164	138	149
Total number of cases	5,262	5,283	5,437	5,624	6,058	6,205	6,356	7,695	7,858

Fig 5.2.30 : Leading 10 Cancer Sites of Males, 2001 - 2009



Criteria for inclusion of cases to the cancer register changed in 2007 to be on par with international standards.

Table 5.2.24 : Number of Newly Registered Cancer Patients at Government Cancer Treatment Centres

Cancer Treatment Centre	Year						
	2008	2009	2010	2011	2012	2013	2014
NCI - Maharagama	11,163	11,756	11,513	12,403	12,550	12,689	13,247
TH - Kandy	3,648	3,634	4,046	5,042	3,717	3,516	4,000
TH - Karapitiya	1,764	1,866	1,793	2,193	2,158	2,455	2,479
TH - Jaffna	412	479	659	1,055	1,048	1,061	1,032
TH - Anuradhapura	712	551	641	698	803	850	1,114
PGH - Badulla	753	794	858	1,430	2,152	2,203	1,527
TH - Batticaloa	Unit not opened	169	565	727	1,094	932	897
TH - Kurunegala	538	804	806	1,174	1, 122	1,042	1,238
PGH - Rathnapura	319	485	636	735	808	767	807
*Total	19,309	20,538	21,517	25,457	25,452	25,515	26,341

* Some patients get registered in more than one cancer treatment centre. Therefore some of the patients may be counted more than once. Hence duplicate entries are possible. For example, after removing all duplicates, the correct number of new cases for 2008 is 16,511 and for 2009 is 16,888. Data are collected not only from the cancer treatment centres but also from pathology labs, oral and maxillo-facial surgery units, MRO returns and death registrars.

5.2.9 National Non Communicable Disease (NCD) Prevention and Control Programme

Non Communicable Diseases (NCD) emerges with the transition of socio-economic, epidemiological and demographic transition over the last few decades. Government hospital statistics indicate that in 2008, 71% of all annual deaths in Sri Lanka are due to chronic NCDs. Among all NCDs, cardiovascular diseases, diabetes, cancers and chronic respiratory diseases are now the leading causes of mortality, morbidity and disability accounting for 29.6%, 9.4%, 3.9% and 8.5% respectively. The NCD unit is the national focal point for prevention and control of acute and chronic NCDs in the country. The unit coordinates and implements its activities through the provincial and regional health authorities. The direction and guidance for the implementation and evaluation of the NCD programme is provided by Secretary, Additional Sectary(Medical Services), Director General of Health Services and Deputy Director General of Medical Services-I. The programme is evaluated and assisted by National Steering Committee and National Advisory body for NCDs.

5.2.9.1 Vision

Country which is not burdened with chronic NCDs, deaths and disabilities.

5.2.9.2 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.

5.2.9.3 Burden of Non Communicable Diseases

The national policy on chronic NCD prevention, addresses four major NCDs and strategies for reduction of shared modifiable risk factors: smoking, alcohol, obesity, unhealthy diet and sedentary lifestyles which are implemented through the existing health network with the support of both government and non-government organizations in the country.

The National NCD Policy emphasizes the promotion of health and well-being of the population by preventing the diseases and providing acute and integrated long term care for people with NCDs. Primary health care facilities at the door step of the community has been strengthened by establishing sustainable screening programme through Healthy Lifestyle Centers (HLCs) and initiating availability of essential generic drugs and technologies to manage NCDs and other NCD related risk factors.

The mandate of the NCD unit is to avert, prevention and control of rapidly growing NCDs through expansion of services, guided by National NCD Policy leading to healthy life free of morbidity, disability and premature mortality with the partnership of relevant stakeholders to lessen the human, social and economic impact to the people in the country.

The activities of the NCD unit were carried out based on the strategic objectives of the NCD Policy and they are as follows.

5.2.9.4 Objectives and Key Strategies of Chronic NCD Prevention and Control Programme

5.2.9.4.1 Objectives

The objective of the chronic NCD prevention programme is to reduce premature mortality (less than 65 years) due to chronic NCDs by 2% 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.

5.2.9.4.2 Key Strategies

- 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

5.2.9.5 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 lifestyles has been indicated in the NCD policy.

NCD screening programme implemented through the NCD unit, consists of 3 strategies.

I. To screen people in HLCs
II. To conduct workplace screening
III. To conduct mobile screening

Ministry of Health has taken an initiative to establish HLCs throughout the island to screen normal people. The target group to screen at Healthy Life style Centres are people who are between 40 to 65 years. Main aim of screening is to identify both behavioural and intermediate risk factors early in view of preventing pre mature deaths due to NCDs.

Main target of HLC programme is to establish at least two HLCs in one MOH area and to screen people in the target population.

HLCs have been mainly established in health institutions. Wherever there is no health institution to establish HLC, approval has been given to establish HLCs in MOH office and in the field clinics.

5.2.9.6 Monitoring and Evaluation of the NCD Programme

1. Monitoring and evaluation of NCD programme is carried out by assessing the trends in morbidity and mortality due to major NCD. This is done by analysing routinely collected morbidity and mortality data.
2. Assessing the trend in the risk factors for NCD. This is usually done by conducting periodic surveys specially the STEP survey.
3. Conducting review meetings at the national and district levels.

Central level review meetings
* NCD steering committee meeting
* National Advisory Board on NCD (NABNCD)
* Quarterly MO(NCD) review meeting

District level review meeting
* Quarterly review meeting

5.2.9.7 Landmark Events of NCD Prevention and Control Programme in 2014

- Establishment of 742 Healthy Lifestyle Centers (HLCs) in primary health care institutions in 2014 for screening people between 40-65 years for early recognition of risk factors and prevention of premature deaths due to NCDs.
- Ministry of Health, Ministry of Youth Affairs and Skills Development and National Youth Services Council signed a Memorandum of Understanding (MOU) for mobilizing youth for NCD prevention in February.

  This was conducted as one action, lead down in the multi sectorial action plan developed at the multi-stake holder meetings held.

  Main objective in signing a MOU is to educate the youth attached to the grass root level youth clubs on adopting healthy life styles.

  Two day residential training program consisting of lectures and practical session was conducted for district youth leaders at the provincial level. This program was reviewed 6 month after the workshop.
- Health warnings about dangers of smoking

  In order to develop high level of awareness of the health risks, suffering and disfigurement of tobacco use across all the age groups, Ministry of Health decided to include pictorial warnings covering 80% of the cigarette packet.

- A national consultative meeting to develop the National Action Plan on NCD prevention and control 2013 - 2020 was conducted with the participation of all relevant stakeholders.
- Training of Trainers programme on "National Guidelines on Management of NCDs at Primary Healthcare Level" for provincial and district level physicians and medical officers attached to primary healthcare institutions was conducted.
- Island wide NCD Risk Factor Surveillance (STEPS) 2014 in collaboration with WHO has been commenced.
- Heart diseases are leading cause of the death in the world. Therefore many initiatives have been taken globally and locally in view of preventing heart diseases in the community. As such, "World Heart Day" is commemorated yearly to make the community aware on the importance of healthy lifestyle. World Heart Day, 2014 Commemorated on 29th September, 2014.
- Conducted one day orientation programme for newly appointed MOO(NCD) on Non Communicable Diseases and how to implement the NCD prevention and control activities at the district level.
- Workshops organized by the NCD unit for upper and middle level managers of the Ministry of Health and other ministries on "Adopting Healthy Lifestyles".
- Circulars/guidelines issued.

5.2.9.8 National Injury Prevention Programme

5.2.9.8.1 Overview

The focal point for injury prevention in the Ministry of Health is the Non Communicable Disease (NCD) Unit. It involves in planning programmes, developing guidelines and policies in preventing almost all types of injuries which could occur during one's lifetime from the date of birth to the death, covering all ages from infancy to adulthood. The programmes are mainly funded through the funds of government of Sri Lanka and some of the activities are funded by the World Health Organization. NCD unit is working in collaboration with other stakeholders in view of integrating injury prevention into everyday life of people across homes, schools, work places and roads in Sri Lanka.

5.2.9.8.2 Injury Policy

NCD unit has already prepared the draft injury policy. The identified key strategies of the policy are,

1) Strengthen coordinated action for injury prevention
2) Raise awareness among general public on prevention of injuries
3) Maintain and recommend legislative and regulatory mechanisms supporting injury prevention
4) Empower community and stake holders to design and develop safe environments
5) Strengthen the organization capacity to improve pre-hospital and institutional care for emergency care and rehabilitation
6) Strengthen the injury information system and promote research

5.2.9.8.3 Injury Surveillance

As no proper injury surveillance system is available in Sri Lanka currently, NCD unit has initiated an injury surveillance system recently with the consultation of specialists. Several steps have been identified in this system such as rapid collection of injury related information, conducting in depth investigations, conducting injury reviews especially focusing on injury related deaths, developing feedback mechanism and at the same time developing electronic system for data collection on injuries. This system will be implemented in step wise manner and the piloting of the system will be carried out in 15 selected hospitals covering all provinces in Sri Lanka viz Provincial General Hospital-Badulla, Teaching Hospital-Batticaloa, National Hospital Sri Lanka, Lady Ridgeway Children's Hospital, Teaching Hospital-Colombo South, Base Hospital-Homagama, Teaching Hospital-Karapitiya, Teaching Hospital-Jaffna, District General Hospital-Kalutara, Base Hospital-Horana, District General Hospital-Nawalapitiya, District General Hospital-Matale, District General Hospital-Polonnaruwa, District General Hospital-Chilaw and Provincial General Hospital-Ratnapura. It is planned to introduce the system throughout the country before the end of 2015 or early 2016.

5.2.9.8.4 Awareness on Injury Prevention

Through the awareness programmes conducted by the NCD unit, public is made aware both on unintentional and intentional injuries. The public awareness programmes are usually being carried out through the health officers, mainly through the public health staff and also through other relevant sectors. Training programmes for trainers in injury prevention, development of training manuals for trainers, developing action plans for specific injury types, developing public awareness educational materials are among some of the programmes conducted by the NCD unit. Moreover, important days related to injuries such as "World Day of Remembrance for Road Traffic Victims" usually due on 3rd Sunday of November each year are also considered to conduct island wide public awareness campaigns. In 2014, the NCD unit organized a national event to commemorate "World Day of Remembrance for Road Traffic Victims" on 17th of November.

5.2.9.8.5 Pre Hospital and Post Admission Care for Injured

Improving pre hospital care as well as post admission care has been considered as a priority and crucial in prevention of accident related morbidities and mortalities. Number of steps have already been taken to improve, especially accident and emergency units in larger hospitals and to improve emergency care units of selected peripheral hospitals where the first contact of the victims of injuries is get, in terms of managing both acute and chronic non communicable diseases. As an initial step, emergency treatment units and the primary care units of identified hospitals along the southern expressway up to Galle were improved under this project.

5.2.9.8.6 Monitoring and Evaluation

Injury prevention action plans, strategies and activities are coordinated, monitored and evaluated at the national level by the National Committee for Prevention of Injuries (NCPI) which consists of all the relevant stake holders from both government and private sectors related to injury prevention chaired by the Director General of Health Services. NCD is also responsible to ensure that stipulated impact and outcomes are achieved through the health sector and other relevant sectors. Members of NCPI meet and discuss matters related to injury prevention and safety promotion issues once in 2 – 3 months. Moreover, technical working groups have been formed under the Director-NCD to look in to specific areas related to injuries such as injury prevention and control, child injury prevention and control, drowning prevention and injury surveillance. Additionally, NCD unit monitors all the relevant activities through review meetings at the district and national level. Moreover specific working groups comprising of relevant stake holders have been functioning to achieve different objectives such as prevention of accidents, prevention of childhood injuries, prevention of drowning and establishing an injury surveillance system.

Table 5.2.25 : Monitoring Indicators of Non Communicable Disease Unit

Indicator Name	Definition	Numerator/Denominator	Unit of Measure	Base Line Figure at Year 2013	Measure	Yearly Target and Progress		
						2014	2015	2016
1. Percentage of MOH areas with two or more functioning Healthy Lifestyle Centers (HLCs)	Percentage of MOH areas with two or more functioning HLCs	MOH areas with two or more functioning HLCs / Total number of MOHs × 100	Percentage	43%	T	25%	50%	70%
					P	55%		
2. Percentage of target population screened for NCD	Percentage of target population (40-65 years) screened for NCD	Total no. screened for NCD (HLCs+Work places+Mobile Clinics) / Target Population × 100	Percentage	6.34%	T	NA		
					P	7.22%		
3. Percentage of people screened having the cardiovascular risk > 30	Percentage of people screened having the cardiovascular risk > 30	Number of people srceened having CVD risk > 30 / Total number screened × 100	Percentage	0.28%	T	NA		
					P	0.45%		
4. Percentage of people screened having the FBS > 126 mg/dl (Diabetes Mellitus)	Percentage of people screened having the FBS > 126 mg/dl	Number of people srceened having FBS > 126 mg/dl / Total number screened × 100	Percentage	4.20%	T	NA		
					P	11.90%		
5. Percentage of screened population having the hypertention	Percentage of people screened having the BP > 140/90	Number of people srceened having BP > 140/90 / Total number screened × 100	Percentage	15.89%	T	NA		
					P	22%		
6. Percentage of screened population having the obesity	Percentage of people screened having the BMI > 30kg/m2/dl	Number of people srceened having BMI > 30kg/m2/dl / Total number screened × 100	Percentage	2.49%	T	NA		
					P	6.90%		

Table 5.2.26 : NCD Screening Activities, Distribution of Risk Factors by District, 2014

RDHS Area	Total Screened	No. of Smokers Detected		No. of Tobacco Chewers Detected		No. of Alcoholics		No. of BMI 25 - 29.9		No. of BMI > 30		No. with BP >= 140/90mmHg		No. with Blood Glucose >= 126mg/dl		No. with CVD 20 - 30		No. with CVD > 30	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Ampara	5,830	562	-	661	412	835	4	572	1,090	83	290	502	767	273	314	21	29	4	11
Anuradhapura	7,053	463	8	555	536	534	5	373	1,569	79	490	731	1,949	339	955	38	109	23	41
Badulla	45,333	3,198	426	5,307	5,401	2,959	65	2,257	8,347	481	2,593	2,780	6,632	2,120	5,067	190	340	82	158
Batticaloa	4,963	346	29	199	404	306	29	401	1,065	99	477	886	1,594	206	1,241	1	4	1	2
Colombo	8,039	663	2	513	482	636	5	528	1,936	148	839	280	785	354	1,050	16	25	69	148
Galle	11,915	569	-	525	642	573	-	604	2,585	109	703	850	2,623	368	1,188	16	44	9	38
Gampaha	22,338	592	1	358	157	212	8	457	632	228	753	562	1,396	268	672	28	72	14	27
Hambantota	8,611	495	1	402	654	533	-	523	1,336	113	362	517	1,446	229	557	52	87	5	10
Jaffna	18,291	1,010	156	1,119	888	1,083	116	1,518	3,402	437	803	1,713	3,673	737	917	18	30	6	18
Kalutara	11,419	556	4	933	786	950	12	632	2,491	121	714	584	1,631	344	965	3	19	1	7
Kalmunai	9,830	573	63	373	1,040	435	26	996	2,361	223	891	276	433	569	1,007	33	53	9	26
Kandy	12,828	684	-	558	383	720	-	819	2,691	260	1,061	625	1,598	638	1,209	23	35	9	11
Kegalle	18,721	849	10	1,269	1,009	1,016	7	1,009	4,435	241	1,232	1,296	3,492	616	2,215	27	69	26	48
Kilinochchi	2,671	186	23	199	136	250	5	211	416	49	130	290	520	73	115	-	5	-	3
Kurunegala	49,390	2,129	7	3,529	2,178	2,842	1	2,669	10,366	555	2,588	2,308	6,497	1,533	4,420	146	351	52	159
Mannar	10,109	645	15	499	540	781	15	880	1,627	351	847	1,492	2,094	367	585	42	39	16	20
Matale	10,935	423	-	628	224	259	-	621	1,029	124	218	308	621	392	572	3	2	1	-
Matara	10,033	282	4	347	284	330	12	592	2,077	168	614	783	2,152	363	793	10	42	8	21
Monaragala	42,189	3,146	-	4,380	4,898	3,734	-	2,021	7,984	346	1,942	2,734	6,835	1,110	2,555	41	80	14	69
Mullaitivu	3,549	339	32	415	206	346	4	366	1,618	111	142	181	293	156	157	-	9	-	-
Nuwara Eliya	9,677	808	254	978	2,641	1,205	775	572	1,729	194	569	501	1,309	594	1,619	90	96	65	192
Polonnaruwa	4,836	145	1	225	159	175	-	170	928	41	301	98	407	74	285	21	53	-	-
Puttalam	10,900	651	24	833	848	780	35	695	2,420	272	1,077	1,770	4,398	484	1,314	32	59	-	-
Rathnapura	25,704	1,373	18	3,153	2,916	2,307	30	1,341	5,572	258	1,392	1,487	4,260	568	1,670	46	83	13	21
Trincomalee	8,903	143	-	236	69	114	-	116	188	26	46	177	112	268	173	54	23	-	-
Vavunia	8,222	1,119	624	1,117	624	980	12	540	874	161	302	1,251	1,484	437	594	116	125	58	53
NIHS	872	64	-	73	54	130	-	156	305	12	81	101	261	73	115	3	3	2	-
Total	383,161	22,013	1,702	29,384	28,571	25,025	1,166	21,639	71,073	5,290	21,457	25,083	59,262	13,553	32,324	1,070	1,886	487	1,083

BMI - Body Mass Index

BP - Blood Pressure

CVD - Cardiovascular Diseases

5.2.10 National Mental Health Programme

5.2.10.1 Introduction

Mental health is an integral part of health and well-being, as reflected in the definition of health in the constitution of the World Health Organization: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Mental health, like other aspects of health, can be affected by a range of socio economic factors that need to be addressed through comprehensive strategies for promotion, prevention, treatment and recovery in a whole-of-government approach. Determinants of mental health and mental disorders include not only individual attributes such as the ability to manage one's thoughts, emotions, behaviours and interactions with others, but also social, cultural, economic, political and environmental factors such as national policies, social protection, living standards, working conditions and community social supports. Exposure to adversity at a young age is an established preventable risk factor for mental disorders.

Health systems have not yet adequately responded to the burden of mental disorders; as a consequence, the gap between the need for treatment and its provision is large all over the world. Between 76% and 85% of people with severe mental disorders receive no treatment for their disorder in low-income and middle-income countries; the corresponding range for high income countries is also high: between 35% and 50%. A further compounding problem is the poor quality of care for those receiving treatment.

5.2.10.2 World Health Organization (WHO) Global Mental Health Action Plan

5.2.10.2.1 Vision

Vision of the WHO Global Mental Health Action Plan is "a world in which mental health is valued, promoted and protected, mental disorders are prevented and persons affected by these disorders are able to exercise the full range of human rights and to access high quality, culturally-appropriate health and social care in a timely way to promote recovery, in order to attain the highest possible level of health and participate fully in society and at work, free from stigmatization and discrimination".

5.2.10.2.2 Goal

Its overall goal is to promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights and reduce the mortality, morbidity and disability for persons with mental disorders.

5.2.10.2.3 Objectives

The Global Mental Health Action Plan has the following objectives:

- To strengthen effective leadership and governance for mental health
- To provide comprehensive, integrated and responsive mental health and social care services in community-based settings
- To implement strategies for promotion and prevention in mental health
- To strengthen information systems, evidence and research for mental health

5.2.10.2.4 Cross Cutting Principles and Approaches

The action plan relies on six cross-cutting principles and approaches.

√ Universal health coverage

Regardless of age, sex, socio economic status, race, ethnicity or sexual orientation and following the principle of equity, persons with mental disorders should be able to access, without the risk of impoverishing themselves, essential health and social services that enable them to achieve recovery and the highest attainable standard of health.

√ Human rights

Mental health strategies, actions and interventions for treatment, prevention and promotion must be compliant with the convention on the rights of persons with disabilities and other international and regional human rights instruments.

√ Evidence-based practice

Mental health strategies and interventions for treatment, prevention and promotion need to be based on scientific evidence and/or best practice, taking cultural considerations into account.

√ Life course approach

Policies, plans and services for mental health need to take account of health and social needs at all stages of the life course, including infancy, childhood, adolescence, adulthood and older age.

√ Multisectoral approach

A comprehensive and coordinated response for mental health requires partnership with multiple public sectors such as health, education, employment, judicial, housing, social and other relevant sectors as well as the private sector, as appropriate to the country situation.

√ Empowerment of persons with mental disorders and psychosocial disabilities

Persons with mental disorders and psychosocial disabilities should be empowered and involved in mental health advocacy, policy, planning, legislation, service provision, monitoring, research and evaluation.

Mental health policy of the Ministry of Health was established in 2005 to provide comprehensive, community based mental health services that will promote the mental wellbeing and improve the services for prevention, treatment and rehabilitation of mental disorders. Mental Health Policy for 2016 - 2025 is revised and drafted.

Directorate of Mental Health which was established in year 2000 is the focal point for mental health in the Ministry of Health responsible for strategic planning; policy development; assess the needs related to mental health of the country with collaboration of other relevant sectors and evaluation of national mental health program at district level regularly.

5.2.10.3 Major Strategies of National Mental Health Program

- Promotion of mental wellbeing
- Standard patient care
- Prevention of suicide
- Reduce alcohol related harm and substance abuse
- Prevention of violence
- Develop infrastructure and human resource
- Monitoring and evaluation of the mental health program

5.2.10.4 Infrastructure Facilities

5.2.10.4.1 National Institute of Mental Health

National Institute of Mental Health (NIMH), Angoda provides specialized mental health care with inpatient care, outpatient care and rehabilitation services. The hospital is equipped with 1,029 beds available in 8 units (4-male, 4-female). There are additional 120 beds for long term male patients. The female long term care is provided by the long term care unit in Mulleriyawa hospital.

NIMH also serves as a training center of excellence for all categories of psychiatric health service providers, including medical students, medical officers (MO-Mental Health, MO-Psychiatry, MD-Psychiatry), nursing officers, occupational therapists and psychiatric social workers.

5.2.10.4.2 Acute Psychiatric Inpatient Care Units

There are 23 psychiatric in-patient units/wards in the country. This includes National Hospital (Colombo), Colombo South (Kalubowila), Lady Ridgeway Hospital–for children (Borella), Colombo North (Ragama), Teaching/General Hospitals in Kalutara, Galle, Badulla, Kandy, Peradeniya, Kurunegala, Trincomalee, Batticaloa, Ampara, Kalmunai, Jaffna, Anuradhapura, Polonnaruwa, Vavuniya, Ratnapura, Nuwara-Eliya and Monaragala. In other General and Base hospitals where acute psychiatric inpatient units are not available, psychiatric patients are admitted to general medical wards.

The total number of beds in psychiatric in-patient units/wards in year 2014 is 2,459. It constitutes of 4 percent of beds available in government hospitals. As an average, there were 27 psychiatric beds per 100,000 individuals. Distribution of psychiatric beds by RDHS Divisions is as follows (Excluding NIMH): Colombo (48), Gampaha (20), Kalutara (30), Galle (28), Badulla (34), Kandy (133), Batticaloa (35), Ampara (16), Kalmunai (12), Jaffna (50), Ratnapura (32), Anuradhapura (24), Polonnaruwa (10) and Monaragala (10).

According to data received to the Medical Statistics Unit, Ministry of Health, patients with mental disorders admitted to psychiatric in-patient units/ wards in 2014 were 47,137 and of them majority (57.4%) were males and 62.7% are in 17-49 years age group.

5.2.10.4.3 Outpatient and Outreach Clinics

There were 78 outpatient clinic centers and 200 outreach clinics by 2008. It has now been increased to 86 outpatient clinic centers and 250 outreach clinics by year 2014. Clinics are conducted by Consultant Psychiatrists, MO-Psychiatry and MO-Mental Health.

5.2.10.4.4 Community Mental Health Program

Follow up community care services are provided to the clients with mental health problems by the Psychiatric Nurses, Community Support Officers (CSO) and Psychiatric Social Workers (PSW). There are 22 Community Support Centers attached to Medical Officer of Health (MOH) areas to help the community when they have mental health problems. In addition consumer and care giver societies (34) have been established to look after the patients in the community.

Day treatment facilities are available in all in-patient units in the government sector. Such facilities are also being provided by other organizations such as SAHANAYA, Richmond Fellowship and NEST. Day treatment facilities generally provide care for consumer groups. Patients stay at the facility either half a day or full day and engage in different activities to improve their basic life competencies and Cognitive Behaviour Therapy (CBT) will be given when necessary.

Intermediate Mental Health Care (Rehabilitation) Units provide services to individuals who do not require intensive medical interventions, but need further treatment and support to develop life competencies for them to live productively. By 2013, there were 22 such centers managed by the Ministry of Health. These are located at Uhumeeya (Kurunegala), Senerathpura (Ampara), Thelippalai & Point Pedro (Jaffna), Laliambe (Matale), Passara (Badulla), Delthota & Dematapitiya (Kandy), Ridiyagama (Hambanthota), Mavadivembu (Batticaloa), Mihintale (Anuradhapura), etc.

5.2.10.5 Human Resources

To date there are 66 consultant psychiatrists are working in the country. The average number of psychiatrists is now 0.3 per 100,000 for the country. There are 90 Medical Officers - Psychiatry with the Diploma in Psychiatry also serving in the country in year 2014.

Medical officers who obtain appointments as Medical Officers in mental health undergo 3 month training in Psychiatry at NIMH and then appointed as MO-Mental Health to hospitals in all districts. The average number of Medical Officers in mental health serving in the country is150 and it is around 0.8 per 100,000 population.

At district level, a Medical Officer/Mental Health (Focal point) has been appointed to Regional Director of Health Service offices to coordinate all mental health services within the respective district. There are 20 appointed focal points working by 2014, and the other districts focal point duties are covered up by a medical officer in mental health attached to a hospital within the district.

There are no clinical psychologists are employed at government health system yet. Nine clinical psychologists are attached to the universities, with 4 of them being attached to medical faculties. However, carder of 24 psychologists has been approved for the government hospitals.

There are 41 psychiatric nursing officers who have undergone six month psychiatric training, working in general and base hospitals. Fifty seven designated Psychiatric Social Workers(PSW) including 32 developmental assistants who were trained at NIMH are working at inpatient psychiatric units and rehabilitation centres providing community based mental health services throughout the country. Furthermore there are 85 Occupational Theraphysts (OT) serving at various hospitals in the country.

5.2.10.6 Mental Disorders

According to the ICD -10 classification, in 2014, of all discharges (47,137) with a psychiatric illness in all hospitals in Sri Lanka, majority (32.3%) were diagnosed as having mood disorders. The major illness among males was having some type of a psychotic illness (Schizophrenia, Schizotypal and delusional disorders) which is accounted for 29.3%. Mood disorders (25.3%) and mental and behavioral disorders due to alcohol consumption (24.9%) are the second and third common illnesses among males respectively. Mood disorders (41.8%) is the most common illness among females and Schizophrenia, Schizotypal and delusional disorders (30.2%) is the next major illness among females.

According to year 2014 monthly returns of the outreach clinics received by the Mental Health Unit, Ministry of Health, the leading conditions among clinic attendees were; Depression (27.15%), Deliberate Self Harm (15.23%), Chronic Psychiatric Disorders (8.59%), Alcohol Dependent Disorders (5.18%) and Bipolar Disorders (4.95%).

5.2.10.7 Performances of 2014

1. Mental Health Act Revised – it protects the human rights of people with mental disorders.
2. Developed National Alcohol Control Policy was published and available in the Health Ministry website - The use of alcohol has a serious effect on public health and is considered to be one of the main risk factors for poor health globally. The concept of the harmful use of alcohol is broad and encompasses the drinking that causes detrimental health, economic and social consequences for the drinker, the people around the drinker and society at large. Hence, the objective of the policy is to prevent initiation and reduce the use of alcohol.
3. Developed National Guideline for Carer and Consumer Society on Mental Health – At present there are 34 consumer & carer societies in Sri Lanka. This guide will help to set up and establish consumer society in all the districts thereby to empower the community, carers and consumers to look after their own mental health within the community and reduce the hospital admissions.
4. Mental Health module was included into the PHM basic training curriculum. As mental health is recognized as an integral part of health, the promotion of mental well-being and prevention of mental disorderds can be effectively carried out through the primary health care network.
5. National programs – 1. Observed World Mental Health Day to make aware general public on "Living with Schizophrenia. 2. Conducted national conference on mental health to appreciate the innovative mental health interventions conducted by the district level officials to reduce alcohol related harm. 3. Conducted media seminar on World Suicide Prevention Day to reduce the stigma on suicide
6. Developed guideline for Mental Health & Psychosocial Support in Emergencies and trained MO/MH (Focal Points) to implement it at district level. Sinhala version of psychosocial first aid booklet is available.
7. Revised MO/MH training curriculum – included community mental health care into existing curriculum.
8. Monitoring and evaluation of mental health activities at district level - quarterly district review meetings were conducted in every district to assess the progress of achieving the seven objectives of the national mental health program. Following the situational analysis of these districts, an action plan was developed by the district teams established under the administrative leadership of the RDHS. The Mental Health Directorate supports the team activities which are designed collaboratively.
9. Established psychiatric wards/units in GH Polonnaruwa and Monaragala.
10. Initiated to establish alcohol rehabilitation centers in all districts – All RDHS were informed to identify underutilized wards in district hospitals.
11. Consultant psychiatrists were informed to conduct alcohol/drug abuse treatment clinics in all Base and General Hospitals.
12. Established 02 intermediate mental health care units (rehabilitation centers) in Kalutara and Kandy districts.

5.3 Medical Supplies and Logistics

5.3.1 Medical Supplies Division

The Medical Supplies Division (MSD) of Ministry of Health is the central organization responsible to supply all pharmaceuticals, surgical items, laboratory items, radioactive items and printed forms for the government sector healthcare institutions island-wide. In addition, MSD is the sole supplier of dangerous drugs (narcotics) to all hospitals in the country including the private sector. In this context, the main functions of MSD are estimating, indenting, procuring, storing, monitoring, distributing and accounting of medical supplies. The national requirement of medical items are procured mainly through the State Pharmaceutical Corporation (SPC) which is the procurement agency for MSD. In addition MSD has its own purchasing unit for emergency local purchase of selected items and procurement of locally manufactured pharmaceuticals in the private sector.

MSD is the central organization where the medical supplies are stored until they are being distributed among government healthcare institutions. It has a network of stores comprising of a central medical stores in Colombo (MSD) and 26 regional stores at the district level (RMSD). The central medical stores consist of 18 bulk warehouses at the main building, 3 bulk warehouses at Angoda, 5 bulk warehouses at Wellawatha, one warehouse at Digana and one warehouse at Welisara.

These Medical items are distributed directly to line ministry institutions by the MSD and to institutions under the provincial administration through Regional Medical Supplies Division (RMSD) based on their annual estimates or on their requests. In addition, donations received from donor agencies such as WHO/ UNICEF, etc. are cleared by the wharf branch of MSD and stored and distributed.

5.3.1.1 Major Achievements

- Medical Supplies Management Information System has been established and it is fully functioning during the year 2014.
- Conducted awareness programmes for 25 districts to improve medical supplies management in the year 2014.
- Weekly supply position review meetings have been regularized with the participation of the representatives of State Pharmaceutical Corporation and Ministry of Health to minimize out of stock situations.
- A plan of action is being implemented to dispose quality failed medical supplies at the district level, which are Kalutara, Matara, Galle, Hambantota, Colombo, Gampaha, Kandy, Kegalle, Batticaloa, Jaffna and Kurunegala districts and it has been completed by the end of the year 2014 and it is to be extended to other districts in the future.
- Work initiated on the new administrative block on the roof top of MSD main building and first stage of the construction has been completed in the year 2014. The remaining work is to be completed in the year 2016.
- Development and modification of the cold store facilities with digital temperature control and monitoring system has been completed, which will ensure continuous 24 hour monitoring of cold chain maintenance in a more reliable & safe manner.
- Necessary funds and required land area has been identified to construct a pre-fabricated 40,000 sq feet store facility for MSD at the Welisara hospital premises.

Table 5.3.1: The Value of Medical Supplies Issued, 2010 - 2014

Medical Supplies Issued	2010 (Mn)	2011 (Mn)	2012 (Mn)	2013 (Mn)	2014 (Mn)
Drug - Issues	10,220	12,175	13,619	14,499	16,123
Drug - Estimate	12,104	14,157	16,636	15,457	18,760
Surgical - Issues	3,622	3,473	4,142	4,874	5,673
Surgical - Estimate	7,572	5,392	8,916	10,441	13,001
Lab - Issues	618	2436	731	969	761
Lab - Estimate	727	492	608	792	1,631
Total - Issues	14,460	18,084	18,492	20,342	22,557
Total - Estimate	20,403	20,041	26,160	26,980	33,391

5.3.2 Medical Technology and Supplies (MT & S)/Cosmetics, Devices and Drugs Regulatory Authority (CDDRA)

5.3.2.1 Introduction

The goal of the Ministry of Health is "Provision of curative, preventive, rehabilitative and prominent services of optimum quality accessible to entire nation". To achieve this goal provision of safe, efficacious and quality drugs and devices is essential. Therefore the goal of the Medical Technology & Supplies (MT & S)/Cosmetics, Devices & Drugs Regulatory Authority (CDDRA) is to achieve a healthy nation by ensuring the provision of safe, quality and efficacious medicinal products and cosmetics.

The Cosmetics, Devices & Drugs (CDD) Act 1980 is the legislative framework which provides the legal authority to regulate Cosmetics, Devices & Drugs in Sri Lanka. Cosmetics, Devices & Drugs Regulatory Authority is responsible for implementation of the provision of the Act and to ensure that the Pharmaceuticals, Medical Devices and Cosmetics available to the public, meet the required standards of quality and are within the existing legislative framework with respect to the production, marketing and dispensing of these items.

5.3.2.2 Objectives of Medical Technology & Supplies (MT & S)/Cosmetics, Devices & Drugs Regulatory Authority (CDDRA)

a) Ensure that all drugs and devices available in Sri Lanka are of safe, efficacious/effective and acceptable quality
b) Ensure all cosmetics available in Sri Lanka are of safe and acceptable quality
c) Ensure uninterrupted availability of drugs, cosmetics and medicinal devices
d) Ensure rational usage

5.3.2.3 Functions of Medical Technology & Supplies (MT & S)/Cosmetics, Devices & Drugs Regulatory Authority (CDDRA)

a) Registering new drugs/cosmetics/medical devices
b) Monitoring and approving changes/variations to those products that are already approved and granted marketing authorization
c) Monitoring and implementing good manufacturing practices for pharmaceutical products and cosmetics
d) Licensing and monitoring of importation, manufacturing, sale, advertisements and distribution surveillance of quality of drugs available in the market
e) Reviewing and approving of advertisements
f) Approving and monitoring of clinical trials
g) Issuing WHO-format certificates of pharmaceutical products for the purposes of export
h) Recalling cosmetics, drugs and devices from the market on safety grounds
i) Conducting human resource development programs
j) Flying squad activities and prosecutions

5.3.2.4 Major Achievements for the year 2014

a) Conducted awareness programme on "Rational Use of Medicine (RUM)" for health care professionals & awareness programme for private sector pharmacies, funded by World Health Organization.

- **Rational Use of Medicine (RUM) for Health Care Professionals**

Irrational use of medicine among healthcare professionals creates several health issues including antimicrobial resistance. Therefore workshops have been conducted on Rational Use of Medicine (RUM) with special emphasis on Anti-Microbial Resistance by CDDRA to pass the massage on rational use of medicines. Pre-interns, interns, medical officers, general practitioners, pharmacists, nurses and consultants were the target professionals.

- **Awareness Programme for Private Sector Pharmacists**

Good Pharmacy Practices (GPP) and Good Storage Practices (GSP) are essential aspects of the pharmaceutical industry. Therefore "Awareness Progammes for Private Sector Pharmacists" have been conducted for private sector pharmacists, pharmacy owners and other officers who are in

private sector pharmacies, to enhance the quality of pharmacy practice.

b) A book has been published with the financial assistance of WHO named "Guideline on the Use of Antimicrobial Medicines for Common Bacterial Infections in Primary Care" for distributing among health care professionals.

c) Sub - committee meetings have been continuously conducted to strengthen the essential recommendations for decision making and for recalling of cosmetics, medical devices and drugs from the market on safety grounds.

- Technical Advisory Committee meetings(TAC)
- Drug Evaluation Sub Committee (DESC)
- Adverse Drug Reaction Sub Committee (SAFRESC)
- Sub Committee on Clinical Trials (SCOCT)
- Cosmetic Evaluation Sub Committee (CESC)
- Medical Device Evaluation Sub Committee (MDESC)
- Advertisement Sub Committee
- Community Pharmacy Sub Committee

d) Carry out legal procedures against offenders.

e) Recently published reference materials are very much essential for updating the pharmaceutical evaluation. As per the request done by CDDRA through WHO Biennium programme, reference materials such as British Pharmacopeia 2014 (BP), European Pharmacopeia 2014 (EUP), United States of Pharmacopeia 2014 (USP), Indian Pharmacopeia 2014 (IP) and Martindale-38th Edition, Cosmetic Reference Standards from SLSI and 67th Edition of BNF 2014 , have been awarded by World Health Organization.

f) Guidelines for the "Conduct of Clinical Trials in Sri Lanka" has been released by Sub-Committee on Clinical Trials (SCOCT), Cosmetic, Devices & Drugs Regulatory Authority.
The aim of this guidance document prepared by SCOCT is to provide comprehensive guidelines to assist clinicians, scientists, sponsors and research organizations to become familiar with the existing procedures and requirements for the conduct of clinical trials in Sri Lanka. These guidelines also indicate the order of the material to be submitted and the minimum requirements for conducting clinical trials. These guidelines are not intended as a comprehensive guide on Good Clinical Practice (GCP), and should be read in conjunction with relevant international GCP guidelines.

g) A seminar had been conducted on "Regulatory Overview for Clinical Research in Sri Lanka by Sub Committee on Clinical Trials (SCOCT)" on 16th December, 2014. All the pharmacists in CDDRA, the members of SCOCT and Ethics Committees in Sri Lanka have participated for the seminar.

5.4 Laboratory and Biomedical Services

5.4.1 Laboratory Services

5.4.1.1 Directorate of Laboratary Services, 2014

Directorate of laboratory services is responsible for establishment and enactment of essential and relevant legislations and also for providing technical and managerial guidelines for the maintenance of laboratories in compliance with nationally and internationally accepted standards.

Total of 622 million rupees funds were allocated for the year 2014 to DDG(LS), out of which 312 million was allocated for purchasing of laboratory equipments. During the year 2014, many laboratories were equipped with fully automated analysers such as haematology analyser and biochemistry analysers. Further, 22 million was allocated for HIV screening tests and 10 million for National Blood Transfusion Services. 300 million rupees was allocated for MSD for purchasing of chemical reagents and 10 million for service agreements. Over 100% of allocated funds were released for hospitals and actual expenditure was 96% of allocations for the year 2014.

Furthermore, Ministry of Health has collaborated with the College of Microbiologists to offer offsite consultancy services by Microbiologists for selected hospitals in the country subject to availability of consultants. Another activity was the improvement of the laboratory service quality through the HSDP project. Initiation of medical laboratory accreditation for state sector laboratories and establishment of accreditation process was started in selected hospitals. Total of 100 million was allocated for the selected hospitals through the HSDP project.

With the support of WHO, Directorate of Laboratory Services has conducted several workshops to promote awareness on the importance of antimicrobial resistance and importance to adhere to infection control practices. Further, workshops were conducted by the National Laboratory Quality Assurance Committee to develop national guidelines for clinical laboratories.

Also, improvement of accessibility and availability for necessary laboratory investigations to the population living in far remote and difficult areas was supported through mobile laboratory service attached to the Director of Laboratory Services. In year 2014, mobile laboratory services were offered at around 200 centres all over the country and more than 80,000 tests were done through the service.

Table 5.4.1 : Allocations and Expenditure (Capital Fund)

Allocations received (in millions)	312
Allocations released to institutions (in millions)	476
Actual expenditure by institutions (in millions)	285
% expenditure from allocation received	91.5%
% expenditure from allocation released	65.5%

Table 5.4.2 : Allocations (World Bank Projects)

Total allocation (in millions)	90
Total released (in millions)	90
% of released over allocation	100%

Table 5.4.3 : WHO Programmes

Continued from previous year	0
Started	2
Completed	1
Continuing to next year	1

Table 5.4.4 : Mobile Laboratory Services

Total number of locations	152
Total number of service days	210

5.4.2 Division of Biomedical Engineering Services (BES)

The Division of Biomedical Engineering Services of the Ministry of Health is entrusted with procuring, installing, commissioning and maintaining medical equipments in line ministry hospitals. This division also provides technical assistance to the Provincial Health Authorities based on their requirements.

Biomedical Engineering Services (BES) is responsible for;

1. Procurement of medical equipments
2. Repairs & maintenance of medical equipments
3. Training of end users and technical staff
4. Provision of local/foreign technical expertise in medical equipment

The head office of the division is located in Colombo has workshop facilities, warehouse facilities for equipments, spare parts storage and administrative functions.

Two Regional Biomedical Engineering Units are established in Galle and Anuradhapura under Biomedical Engineers and 22 hospital based maintenance units. They are established so that the down time of equipment as well as maintenance cost could be kept minimum.

BES also conducting training courses on maintaining & proper handling of medical equipments to end users as well as its own technical staff.

5.4.2.1 Major Achievements in 2014

5.4.2.1.1 Preparing of Procurement Plan

Medical equipment requirements were taken from hospitals on priority basis and those requirements were assessed with the available data in BES and also with the information gathering from the hospital based Biomedical Engineering Service Units.

5.4.2.1.2 Training Programs for BES Staff and End Users

Number of training programs were arranged for the technical staff of the division as well as end users with the help of local and foreign experts.

5.4.2.1.3 Training for Engineering Graduates

The Biomedical Engineering Services have been providing facilities for industrial training to engineering undergraduates from University of Peradeniya.

5.4.2.1.4 Training for Armed Forces

Large number of armed force personnels have undergone training in the division during the past year and they would work in armed forces hospitals as Biomedical Technicians and officers.

5.4.2.1.5 Cooperation with Universities

BES has initiated a program to prepare a software for inventory management with the cooperation of the Faculty of Engineering, University of Peradeniya.

Table 5.4.5 : Major Procurements in 2014

	Description	Cost
1	Provision of equipments to strengthen ICUs in line ministry hospitals	Rs. 120 Mn
2	Provision of monitoring equipments for line ministry hospitals	Rs. 65 Mn
3	Provision of equipments for new operation theatres at GH-Kegalle	Rs. 60 Mn
4	Supply of Mammography Machines for TH-Kandy, TH-Peradeniya, GH-Badulla & NHSL	Rs. 140 Mn
5	Provision of Cathlab for SBSCH	Rs. 135 Mn
6	Provision of operation theatre equipments (64 OT Tables, 30 OT Lamps, 30 Mobile OT Lamps & 83 Diathermy Machines)	Rs. 145 Mn
7	Provision of Heart Lung Machines for NHSL & TH-Karapitiya	Rs. 45 Mn
8	Provision of 8 Colour Doppler Ultrasound Scanner Machines	Rs. 14.7 Mn
9	Provision of 4 Echocardiography Machines	Rs. 40 Mn
10	Provision of CTG Machines (58 from JICS project & 75 from GOSL)	Rs. 143 Mn
11	Provision of 7 Endoscopy Systems	Rs. 61 Mn
12	Provision of 9 Laparoscopy Systems (Surgical & VOG)	Rs. 128 Mn
13	Provision of 44 CPAP Machines	Rs. 16 Mn
14	Provision of 138 Defibrillators	Rs. 66 Mn
15	Provision of 6 Film Processors	Rs. 7.7 Mn
16	Provision of Infant Care Equipments (37 Phototheray & 15 Resuscitators)	Rs.17.8 Mn
17	Provision of 314 Infusion Pumps	Rs. 32 Mn
18	Provision of 25 Haemodialysis Machines	Rs. 60 Mn
19	Provision of Upper GI Endoscopy for BH-Maderigiriya	Rs. 16 Mn
20	Provision of X-ray Machine for BH-Tangalla	Rs. 9 Mn

5.4.2.2 Development Activities Planned for 2015

- Provision of new Mammography Unit for Rathnapura, Badulla & Hambantota - Rs. 150 Mn
- Provision of Digital X-Ray Machine for GH-Kalutara & GH-Hambantota - Rs. 60 Mn
- Provision of X-Ray Machine (Fluoroscopy) for TH-Kandy & TH-Kurunegala - Rs. 60 Mn
- Provision of CT Scanner for LRH & GH-Chilaw - Rs. 160 Mn
- Provision of MRI Scanner for NHSL & GH-Badulla - Rs. 350 Mn

5.4.3 National Drug Quality Assurance Laboratory

National Drug Quality Assurance Laboratory (NDQAL) provides the technical support needed to operate the 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 the NDQAL is to conduct laboratory tests necessary for determining compliance with produt safety and quality requirements. In the assessment of quality, the most important characteristics of a drug product to consider are its appearance, identity, purity, potency, uniformity and bio-availability. Drug products are tested according to pharmacopoeial specifications or standards claimed by the manufacturer. Quality testing is carried out at different points in the drug distribution.

Director, NDQAL functions as an additional approved analyst under Cosmetic Devices and Drugs (CDD) Act No. 27 of 1980.

Other functions of NDQAL includes;

1. Provide advice on pharmaceutical evaluation of registration documentation of the drug registration applications.
2. Take part in Good Manufacturing Practice (GMP) inspections of pharmaceutical manufacturing facilities.
3. Provide practical training and conducting lectures to university undergraduates following BSc. in Pharmacy, BSc. in Chemistry, BSc. in Biochemistry & Molecular Biology and students following internal pharmacy courses.
4. Participating in workshops/seminars conducted by the Ministry of Health on pharmaceutical related areas as resource persons and conducting workshops on the same field for relevant groups such as internal pharmacists.
5. Carrying out reseach on a limited scale bio-equivalence and stability of pharmaceuticals.

5.4.3.1 Services Provided during 2014

1. NDQAL analyzed 709 samples, which includes 531 post marketing samples (Complaints, formal, surveillance, etc.) and 178 pre marketing samples (registration, tender, pre-shipment, etc.).
2. Organized practical training programmes for intern pharmacists on quality assurance of drugs as an elective training for their 2nd year examination.
3. Perform routine GMP inspections of pharmaceutical manufacturers in collaboration with Drug Regulatory Authority.
4. The staff of NDQAL participated as resource persons in workshops/seminars conducted by MOH on pharmaceutical field.
5. Upgraded laboratory facilities at NDQAL by purchasing 6 laboratory instruments worth Rs. 10,485,324/-.

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

6.1 Education, Training and Research Unit

6.1.1 Introduction

Education, Training and Research Unit of the Ministry of Health which functions under the purview of Deputy Director General (ET&R) is the focal point in policy formulation, providing technical guidance related to training and also coordinating of basic training programmes for all staff categories except for basic degree programmes for medical officers and dental surgeons. Furthermore, the unit is responsible for capacity building of the health work force through post basic and in-service training programmes. In addition, the unit is responsible for developing policies and capacity in research related to health.

Medical Research Institute (MRI) and National Institute of Health Sciences (NIHS) are two institutions, which come under the purview of the DDG (ET&R). Coordination and technical supervision of the work carried out by these institutions are responsibilities of the DDG (ET&R).

Furthermore, ET&R Unit coordinates with Ceylon Medical College Council, University Grants Commission and other relevant academic & professional institutions and organizations in Sri Lanka with the objective of strengthening human resource capacity of the health sector.

Following are the highlights of key activities carried out during 2014 by the ET&R Unit.

6.1.2 Recruitment for Basic Training

Intake for basic training was determined by the administrative sections of the Ministry of Health in consultation with ET&R Unit for the year 2014 (Table 6.1). An orientation programme of 6 months was conducted for 4 categories of graduates from the universities in Sri Lanka.

Table 6.1 : Basic Trainings Conducted

Category of Staff		No. of Basic Trainings	No. of Graduates
1	Nursing Officers	3,661	118
2	Medical Laboratory Technologists	153	150
3	Pharmacists	147	78
4	Physiotherapists	73	131
5	Occupational Therapists	20	-
6	Radiographers	48	-
7	Public Health Midwives	130	-
8	Public Health Inspectors	273	-
9	Entomological Assistants	19	-
10	Opthalmic Technologists	32	-
11	Dental Technicians	5	-
12	School Dental Therapists	25	-

6.1.2.1 Capacity Development of Service Providers of the Department of Health

The ET&R Unit plays the pivotal role in management of in-service training programmes in the health sector by providing the necessary technical and financial assistance. Depending on the institutional needs, during the year 2014 funds were allocated for the training of many categories of the health workforce. The ET&R Unit developed the ISTP (In-Service Trainig Programme) management system which included reviewing of the training proposals for identification of training needs of institutions and the categories, approval for funding and monitoring & evaluation of training programmes.

6.1.2.2 In-service Training Programmes Conducted by the ET&R Unit

ET&R Unit regularly carries out in-service training programmes for different staff categories based on the requests made by the heads of the institutions, professional organizations and post basic training programmes for nursing officers. In-service training programmes conducted by the ET&R Unit during the year 2014 are given inTable 6.2.

Table 6.2 : In-Service Training Programmes

Category	Training Programme	No. Trained during 2014
Medical Officers	Good Intern Programme	900
	Upgrading of Administrative Skills	40
	Language Competency (Tamil)	200
	Medico Legal Work	92
	Research Capacity	35
Matrons	Supervisory Management	60
Nursing Sisters	Training of Trainers on Health Assistants	80
Nursing Tutors	Training of Trainers on Attendant Training	80
Nursing Officers	NICS Training	364
	Dengue Management	969
	Tobacco Cessation & NCD Prevention among Nursing Professionals	40
PSM Categories	Life Skills Development	120
	First Aid in Poisoning	150
Telephone Operators	Training Programme for Telephone Operators	100
Management Assistants & Development Officers	Management of Poisoning	650
Special Programmes		
Library Users (Faculty of Indigenous Medicine, Faculties of Medicine - Colombo and Peradeniya, Ministry of Health, HEB, KDU, MRI Libraries)	Library Users Awareness	75
Medical Officers, Nursing Officers, Nursing Tutors, Public Health Nursing Tutors, Supervisory Public Health Midwives	Trainer Capacity Development on Teaching & Learning Methods	610
Public Health Midwives	Trainer Capacity Development	466

6.1.2.3 Overseas Training Programmes

In addition to local training programmes, the unit conducted several overseas training programmes as well. A total of 69 officers, representing different categories of health staff have participated in these training programmes (Table 6.3).

6.1.2.4 In-service Training Programmes Conducted by Health Institutions

With the intention of improving the quality of service, ET&R Unit regularly provides financial assistance to the authorities of the health institutions, which functions under line ministry and provincial health service. Rs. 30 million allocated for the year 2014 has been completely utilized (Table 6.4).

6.1.3 Infrastructure Development

According to the Health Sector Development Project (HSDP) four training institutions will be upgraded to the status of "National Standards" which consider several components such as governance, curriculum, trainer capacity, infrastructure and evaluation. Based on the national standards for infrastructure facilities (construction & renovations and teaching-learning equipments) for the training schools, funds were allocated as follows. Fund allocation was Rs. 30.6 Mn for the Schools of Nursing, Rs. 18.5 Mn for the schools of PSM/ Paramedical and Rs.10.2 Mn for other institutions.

Table 6.3 : Overseas Trainings Conducted for Health Staff

Country	Training Programme	Number Participated	Period
Singapore	Trainer Capacity Development	27	One Week
	Gerontology Nursing	16	Four Weeks
	Management Training	20	Two Weeks
Korea	Management Training	06	Two Weeks

Table 6.4 : Fund Allocation for In-Service Training Programmes for Health Institutions

Category	Allocated funds (in Rs. Mn.)
Consultants	2.1
Administrative Grade	2
Medical Officers	9.2
Special Grade Nursing Officers	2.1
Nursing Officers	4.42
PSM	4
Paramedics	3.2
Programme & Planning Officers/Development Officers/Management Assistants	3.3
Health Assistants	2.1
Other	1.2

6.1.4 Research

Education, Training & Research Unit of the Ministry of Health coordinates the research activities in collaboration with National Health Research Council (NHRC) to promote research in health. The research proposals, submitted to the unit 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. Several workshops were conducted for the members of the Ethical Review Committees of the healthcare institutions to improve their capacities in ethical aspects of research. Currently the unit is in the process of finalizing the act for establishment of the National Health Research Council, which will be the apex body responsible for promoting health research in the national health system.

6.1.4.1 Research Allowance

According to the Management Services Circular No. 44 and 45 of 2010, introduced in 2011, payment of research allowances for executive grade officers is in process. Research subcommittee has been established in the Ministry of Health, under the Chairmanship of the Secretary of Health and three senior officials as members, in order to facilitate the process of research proposal approval and payment of research allowance. To facilitate and streamline the process further, guidelines for submission and evaluation of research proposals and for the functioning, Institutional Ethical Review Committee were formulated and made available. 904 Research proposals were submitted in 2014.

6.1.4.2 Books, Journals and Publications

Rs. 1.3 Mn was allocated for training schools and Rs. 0.5 Mn was allocated for Teaching Hospitals and other institutions for the purchase of text books & journals.

6.1.4.3 Publications

Following publications were made available out and distributed among the service providers of the Department of Health with the intention of capacity development.

1. Hand Book for Advance Patient Care Management and Rehabilitation on Spinal Cord Injury

2. Experience Record Book for Nursing Students

6.1.5 New Developments in 2014

Following activities were initiated with the objective of improving the quality of educational Training.

1. Formulation of national standards for training programmes & training schools
2. Development of a training policy
3. Revision of procedure manual of BSc Nursing
4. Curriculum revisions for Attendant Training, Enterostomal Therapy, BSc Nursing, Intensive Care Nursing

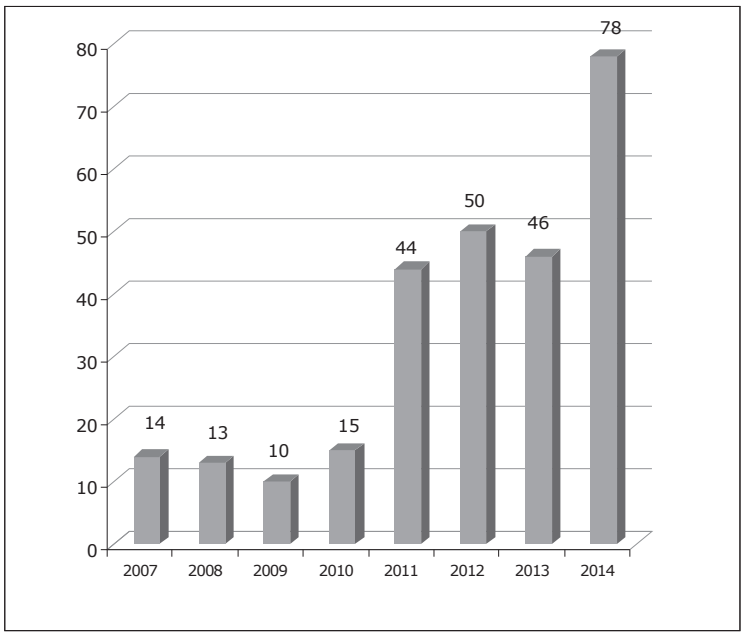
6.2 Medical Research Institute

The Medical Research Institute, which was established in 1900, in its capacity as the premier research institute for biomedical and allied fields is dedicated to the aim of improving health and wellbeing of the country. MRI is a major service provider for all hospitals in Sri Lanka with special and specific diagnostic services.

It also functions as the Regional Reference Laboratory for Poliomyelitis and National Reference Laboratory for japanese encephalitis, measles, rubella, rotavirus, influenza, leptospirosis, toxoplasmosis, food and water microbiology, immunological investigations, special parasitological investigations and platelet aggregation studies. In addition, the MRI is the National Control Laboratory of the National Regulatory Authority for vaccines and biologicals. It also carries out pre-registration evaluation of pharmaceuticals and reagents. The MRI takes great pride in its contribution to the advancement of knowledge, through research and training.

78 Research projects have been evaluated by the Research and Ethics Review Committees in year 2014. The research fund at MRI is available for all researchers working in the Ministry of Health. The Research and Ethics Review Committees of MRI evaluates a number of projects which involve other fields of study which are not directly related to MRI.

Fig 6.1 : MRI Research Participation Activities per Year



The MRI conducts research in various fields in bacteriology, virology, mycology, parasitology, entomology, immunology, histopathology, haematology, biochemistry, nutrition, pharmacology, natural products and animal sciences. It also supports research in areas needing advanced techniques of animal studies and drug trials. During the past few years, the availability of a research grant from the treasury has greatly contributed to the advancement of research at the MRI. These funds are available for all researchers attached to the Ministry of Health.

6.2.1 Achievements of the Research and Ethics Committees of MRI

The Research and Ethics Committees at MRI have observed a marked increase in the number of research projects evaluated by the Research and Ethics Committees in year 2014. This is nearly a 40% increase from the number in 2013.

This reflects the interest of the researchers in health and health related fields. Nevertheless, nearly 50% of the research projects have been conducted with the participation of the research staff at MRI during the past 1 year.

The MRI research committee renders an invaluable service to the Post Graduate Institute of Medicine by funding research projects for trainees in various post graduate fields.

The MRI research committee has opened its doors to students to pursue research of their interest. It has contributed immensely towards the post graduate education in the country by funding research of post graduate and undergraduate students. 30% of the projects were from such students.

The research projects carried out at MRI have been accepted as of excellent quality by other academic bodies of the country. This has been evidenced by the winning of several awards at national and international forums.

The conclusions from the studies conducted at MRI have been made available to the relevant authorities and have been utilized to improve the health care system of the country. The proceedings of the Research and Ethics Committees have been streamlined to provide a better research background.

The Ethics Review Committee has been a member of the Forum of Ethics Review Committees of Sri Lanka (FERCSL) which conducts programs for continuous education in the field of ethics. The members of the Ethics Review Committee attend regular training programmes and workshops conducted by the FERCSL. These workshops increased the awareness of the participants to the ethical standards and problems faced in using human subjects for research including drug trials. It also opened up a forum for discussion by meeting experts in the field of ethics and like minded researchers.

The Standard Operating Procedures (SOP) of the Ethics Review Committee has been finalized and accepted by the members. The committee has recruited 3 non-medical members including a lawyer as members of the committee. The Ethics Review Committee at MRI has been accepted by the Ministry of Health. The next step for the Ethics Review Committee is to obtain recognition by the Federation of Ethical Review Committees of Asia-Pacific (FERCAP). The committee is dedicated to get this recognition through hard work and dedication.

The Department of Virology expanded the real time PCR diagnostics to cover viral infections HSV, EBV, CMV, BK virus and Parvo B 19 forn immune-compromised and other patients. The Department of Pharmacology has installed a new UV spectrophotometer for monitoring drug levels and other pharmacological tests. A series of serological tests for the diagnosis of invasive fungal infections including *Cryptococcus neoformans*was initiated by the Department of Mycology.

The Department of Immunology commenced component resolved diagnostics for allergy. An important step in the diagnosis of food borne infection was initiated by establishing pathogen detection by PCR method in the Food and Water Microbiology Laboratory.

The Department of Parasitology tests insect repellents for mosquitoes and house flies. This year cockroach bio efficacy tests were initiated.

The Animal Centre at MRI has continued to train post graduate and undergraduate students in laboratory animal research, numbering 230. In addition, nearly 10,000ml of animal blood and 3,700 animals have been issued for research studies, etc.

6.3 National Institute of Health Sciences

The NIHS is the leading health sector training institute in the country which coordinates public health manpower development activities under the Ministry of Health. Apart from this primary objective it also conducts health service research and provides guidance to Ministry of Health on its policy on health manpower development.

6.3.1 Training Activities

The training faculty has conducted four basic training programmes and forty five in-service and post graduate training programmes and one international training programme in the year 2014. In order to cater to an ever rising demand for health training, the NIHS is introducing new training technologies and strengthening the existing training programmes with necessary revisions of teaching modules.

NIHS has also revised several of its training curricula to improve the trainer/examiner capacity which will help the training activities in the future. These include PHM Part I & II curriculum revision, review and revision of the MOH curriculum with other stakeholder institutions, revision of the MLT curriculum, SPHM curriculum and revision of curriculum of Tutor Training (Educational Science) Diploma.

6.3.2 Public Health Field Services

The NIHS is very unique in possessing its own field training area catering for a population in excess of 315,342. Performance of public health activities in this field training area was quite satisfactory with most indicators meeting the national standards. Field and clinic care performances were steadily increasing over the years catering the whole life span with the introduction of pre-conception care & nutrition clinics and upgrading existing well-women clinic care to the community.

School health activities were also quite satisfactory in the field training area with 100% coverage by the school health programme. Food sampling activities for year 2014 resulted a total of 281 formal and 199 informal food samples with 74 prosecutions in the area.

6.3.3 Laboratory Services

For strengthening of " National Food Control Infrastructure" the Ministry of Health in consultation with the Food & Agriculture Organization formulated a project for the establishment of a Food Control Laboratory utilizing UNDP funds since the NIHS, Kalutara at that time is the only institution conducting the basic training of Public Health Inspectors and also plays a major role in the training of food inspectors. The ministry decided to set up the laboratory at this institute and it has been functioning since November 1987. The laboratory plays a significant role in the country's national food control programme with the effective inspectorate.

This is the very first food analytical laboratory of the Ministry of Health and provides services to all administrative areas of the country except the city limits of Colombo.

Selecting the staff nationally has become a must. The NIHS has already proposed this need to the ministry and discussions are on the way to decide the criteria for the recruitment.

6.3.4 WHO Collaborating Centre (CC) for Public Health Workforce Development

NIHS also performed as a WHO collaborating center by completing all due activities for year 2014 by their respective dead lines. WHO CC was established in 2012 and it will engage in mutually beneficial activities to further strengthen the bond between the Ministry of Health and the WHO.

Table 6.5 : List of Training Programmes Conducted at NIHS, 2014

	Training Program	No. of Training Programmes Conducted
Basic Training		
1	Diploma in Medical Laboratory Technology	1
2	Public Health Midwives' Part II Training	1
3	Diploma in Pharmacy	1
4	Public Health Inspector Diploma Training	1
In-service and Post Graduate Training		
1	Pre Palcement Training for Post Intern Medical Offices (AMOH)	2
2	Orientation on Management of Community Health for MOOH/RE/MOMCH/ MOO(PH)	2
3	Training of Trainers (Educational Secience) for Trainers in Health Training Schools	3
4	Health Learning Material Development Workshop	2
5	Training of Trainers (Educational Science)	1
6	Field Training for PGIM Postgraduate Diploma on Elderly Medicine Trainees	4
7	Msc. (Community Medicine) PGIM	1
8	Community Health Management for Middle Level Managers	1
9	Public Health Legistation for MOOH	1
10	Taining on Cause of Death Certification for Doctors of Different Grades Working at Colombo South Teaching Hospital, Kalubowila	4
11	Training Course on International Classification of Diseases	2
12	Taining on Cause of Death Certification for Doctors of Different Grades Working at Base Hospital, Awissawella	3
13	Taining on Cause of Death Certification for Doctors Working at Divisional Hospital, Athurugiriya	1
14	Orientation Programme for Nutrionists of Ministry of Helath	1
15	Orientation Programme for Diet Stewards	1
16	Training Programme in Capacity Building for Master Trainers in Communication Skills	1
17	Communication and Management Skiils Training for Medical Officers in the Kalutara District	1
18	Training Programme on Health System Research	1
19	Orientation Training Programme for Graduate Medical Laboratory Technicians	2
20	Workshop on " Writing Standard Operating Procedures for Medical Laboratory Technologists"	1
21	Workshop on " Writing Standard Operating Procedures for Medical Laboratory Technologists on Technical Advances in Body Fluid Analysis"	1
22	Workshop for Laboratory Orderlies on "Laboratory Safety, Personal Safety & Safety of Equipments"	1
23	Training Programme on Rabies Control for Rabies PHII	1
24	Training Programme for Staff of Palnning Unit in the Ministry of Health	1
25	Introductory Programme for BSc. Nutrition Trainees from Wayamba University	1
26	Clerksip Appointment in Community Medicine for Medical Students of Sri Jayawardhanapura University	2
27	Strengthening Capacity of Field Trainers to Provide Competency based Training	2
28	Supervising Public Health Midwife's Training	1
International Training		
1	Strengthening Hospital Reporting Systems on Reporting Cause of Death based on ICD-10 and Conducting a Training Course in ICD-10 Morbidity and Mortality Coding in the Republic of Maldives	1

Detailed Tables

Table 1. Administrative Divisions and Local Government Bodies, 2014

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
Monaragala	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 1988[1]	Percentage Land Area	2014*			Average Annual Growth Rate % 1981 - 2012 [3]
			Population ('000) [2]	Percentage Distribution of Population	Population Density (Persons per sq. km)	
Sri Lanka	**62,705**	**100.00**	**20,771**	**100.0**	**332**	**1.0**
Western Province	**3,593**	**5.73**	**5,936**	**28.6**	**1,653**	
Colombo	676	1.08	2,357	11.3	3,487	1.0
Gampaha	1,341	2.14	2,338	11.3	1,744	1.7
Kalutara	1,576	2.51	1,241	6.0	788	1.2
Central Province	**5,575**	**8.89**	**2,631**	**12.7**	**472**	
Kandy	1,917	3.06	1,402	6.7	732	0.9
Matale	1,952	3.11	496	2.4	255	1.0
Nuwara Eliya	1,706	2.72	733	3.5	430	0.6
Southern Province	**5,383**	**8.58**	**2,532**	**12.2**	**471**	
Galle	1,617	2.58	1,082	5.2	670	0.9
Matara	1,270	2.03	831	4.0	655	0.7
Hambantota	2,496	3.98	619	3.0	248	1.1
Northern Province	**8,290**	**13.22**	**1,085**	**5.2**	**131**	
Jaffna	929	1.48	593	2.9	639	-0.7
Kilinochchi	1,205	1.92	118	0.6	98	0.7
Mannar	1,880	3.00	103	0.5	55	-0.2
Vavuniya	1,861	2.97	177	0.9	96	2.0
Mullaitivu	2,415	3.85	94	0.5	39	0.7
Eastern Province	**9,361**	**14.93**	**1,593**	**7.7**	**171**	
Batticaloa	2,610	4.16	535	2.6	205	1.5
Ampara	4,222	6.73	667	3.2	158	1.7
Trincomalee	2,529	4.03	391	1.9	155	1.3
North-Western Province	**7,506**	**11.97**	**2,425**	**11.7**	**324**	
Kurunegala	4,624	7.37	1,645	7.9	356	0.9
Puttalam	2,882	4.60	780	3.8	271	1.4
North Central Province	**9,741**	**15.53**	**1,298**	**6.2**	**134**	
Anuradhapura	6,664	10.63	883	4.3	133	1.3
Polonnaruwa	3,077	4.91	415	2.0	135	1.5
Uva Province	**8,335**	**13.29**	**1,301**	**6.3**	**157**	
Badulla	2,827	4.51	835	4.0	296	0.9
Monaragala	5,508	8.78	466	2.2	85	1.6
Sabaragamuwa Province	**4,921**	**7.85**	**1,970**	**9.5**	**401**	
Ratnapura	3,236	5.16	1,115	5.4	345	1.3
Kegalle	1,685	2.69	855	4.1	508	0.7

* Provisional

Source : [1] Survey General's Department

[2] Registrar General's Department

[3] Census of Population & Housing, 2012

Table 3. Population by Five Year Age Groups and Sex, 1981, 2001, 2012 and 2014

Age Group	1981 [1]		2001 [1]		2012 [1]		2014* [2]					
							Total		Male		Female	
	Population	%	Population	%	population ('000)	%	Population ('000)	%	Population ('000)	%	Population ('000)	%
All ages	14,846,750	100.0	16,929,689	100.0	20,359	100.0	20,771	100.0	10,056	100.0	10,715	100.0
0 - 4	1,854,738	12.5	1,439,761	8.5	1,744	8.6	1,779	8.6	897	8.9	882	8.2
5 - 9	1,682,527	11.3	1,483,591	8.8	1,748	8.6	1,783	8.6	900	8.9	883	8.2
10 - 14	1,689,333	11.4	1,525,674	9.0	1,640	8.1	1,673	8.1	846	8.4	827	7.7
15 - 19	1,603,187	10.8	1,646,827	9.7	1,644	8.1	1,677	8.1	836	8.3	841	7.8
20 - 24	1,526,463	10.2	1,591,126	9.4	1,533	7.5	1,564	7.5	757	7.5	807	7.5
25 - 29	1,274,857	8.6	1,340,562	7.9	1,553	7.6	1,584	7.6	759	7.5	825	7.7
30 - 34	1,125,426	7.6	1,290,121	7.6	1,639	8.1	1,673	8.1	813	8.1	860	8.0
35 - 39	839,073	5.7	1,258,112	7.4	1,409	6.9	1,438	6.9	700	7.0	738	6.9
40 - 44	698,203	4.7	1,170,941	6.9	1,359	6.7	1,387	6.7	675	6.7	712	6.6
45 - 49	609,289	4.1	1,030,560	6.1	1,286	6.3	1,312	6.3	631	6.3	681	6.4
50 - 54	539,524	3.6	917,139	5.4	1,219	6.0	1,244	6.0	593	5.9	651	6.1
55 - 59	422,322	2.8	671,403	4.0	1,064	5.2	1,086	5.2	511	5.1	575	5.4
60 & above	981,808	6.6	1,563,872	9.2	2,521	12.4	2,571	12.4	1,138	11.3	1,433	13.4

* Provisional

Note : Year 2001 population excludes the districts Jaffna, Mannar, Vavunia, Mullaitivu, Kilinochchi, Batticaloa & Trincomalee.

Source : [1] Census of Population and Housing
[2] Registrar General's Department

Table 4. Vital Statistics by District

District	Crude Birth Rate (CBR)		Crude Death Rate (CDR)		Maternal Mortality Rate, 2010 Per 100,000 Live Births*	Infant Mortality Rate 2010	Neo-Natal Mortality Rate	
	2013*	2014*	2013*	2014*			2009	2010
	Per 1,000 Population					Per 1,000 Live Births		
Colombo	16.1	15.4	7.0	6.8	7.2	15.6	8.4	9.1
Gampaha	14.6	13.7	6.0	6.0	18.6	3.9	3.2	2.9
Kalutara	15.8	14.8	6.6	6.5	24.7	5.6	4.1	4.3
Kandy	19.6	18.8	7.1	7.2	20.4	16.6	10.2	12.6
Matale	19.4	19.1	6.0	6.5	20.0	7.6	4.7	5.9
Nuwara Eliya	20.5	17.5	6.6	6.2	20.4	12.1	9.9	6.8
Galle	17.1	16.7	7.2	7.3	31.9	8.6	6.5	6.5
Matara	16.2	15.2	6.2	6.3	0.0	10.3	6.9	7.9
Hambantota	20.7	20.9	5.5	5.4	11.4	5.4	3.7	3.5
Jaffna	17.3	14.9	7.2	7.1	80.2	13.0	4.7	10.0
Kilinochchi	25.5	19.1	3.4	2.9	26.2	0.3	0.0	0.0
Mannar	19.5	15.4	3.8	3.7	0.0	0.0	0.8	0.0
Vavuniya	20.3	19.6	4.9	4.9	31.5	8.2	14.3	6.0
Mullaitivu	11.9	11.6	6.0	4.2	0.0	26.0	3.1	2.4
Batticaloa	20.0	18.1	4.8	4.8	48.9	19.2	14.1	15.9
Ampara	22.6	21.1	4.6	4.6	21.3	4.3	1.8	2.5
Trincomalee	20.8	22.1	4.1	4.1	49.3	3.0	2.7	1.5
Kurunegala	17.0	16.0	6.6	6.6	34.3	9.6	7.7	8.0
Puttalam	21.1	19.2	5.5	5.4	7.1	6.7	4.4	5.2
Anuradhapura	19.3	17.8	5.4	5.5	43.7	16.7	7.9	13.9
Polonnaruwa	18.6	17.7	5.3	5.5	0.0	2.7	5.3	2.3
Badulla	18.7	18.4	6.1	6.4	28.5	8.3	3.3	5.5
Monaragala	19.6	19.5	4.7	4.7	14.6	2.8	2.1	1.3
Ratnapura	18.5	18.0	6.2	6.1	5.0	7.2	5.1	4.9
Kegalle	16.3	16.0	6.9	6.9	27.5	6.1	4.6	4.0
Sri Lanka	**17.9**	**16.9**	**6.2**	**6.2**	**22.0**	**9.9**	**6.4**	**7.0**

* Provisional *Source : Registrar General's Department*

Note : CBR and CDR are based on usual residence data.

All other indicators are based on place of occurance data.

Table 5. Number of Households in Occupied Housing Units by Main Source of Drinking Water and District, 2012

Province/District	Total households	Main source of drinking water												
		Protected well within premises	protected well outside premises	Unprotected well	* Tap within unit	* Tap within premises but outside unit	* Tap outside premises	Rural water supply project	Tube well	Bowser	River/ tank/ streams/ spring	Rain water	Botteled water	Other
Sri Lanka	5,264,282	1,652,972	772,819	211,556	1,110,050	363,043	181,235	482,937	177,432	18,931	239,952	4,022	9,984	39,349
Western Province														
Colombo	572,475	123,735	11,188	1,951	360,380	29,938	26,539	12,728	2,065	38	1,560	112	828	1,413
Gampaha	604,009	317,581	43,463	13,128	126,947	26,607	17,208	18,388	35,527	481	274	131	605	3,669
Kalutara	305,737	138,335	41,714	13,508	63,237	9,212	5,633	20,378	7,272	90	4,933	90	43	1,292
Central Province														
Kandy	348,019	49,629	38,580	10,117	132,091	28,270	14,564	39,395	6,762	688	24,032	221	61	3,609
Matale	129,710	26,731	22,822	5,253	24,559	8,876	4,168	22,399	7,500	62	6,605	28	63	644
Nuwara-Eliya	181,182	9,149	10,157	6,899	19,002	22,837	11,826	38,262	1,169	66	60,177	103	17	1,518
Southern Province														
Galle	273,140	117,064	40,126	19,214	56,542	14,807	7,671	7,028	3,171	135	5,984	10	41	1,347
Matara	206,790	65,292	25,843	12,457	46,985	17,580	3,913	19,013	1,562	14	13,140	48	25	918
Hambantota	156,476	18,709	11,881	3,618	38,450	42,035	7,728	24,791	3,666	501	3,264	57	108	1,668
Northern Province														
Jaffna	140,323	54,642	44,554	1,255	2,407	2,963	14,251	-	15,607	3,142	13	3	53	1,433
Killinochchi	28,369	9,033	9,652	7,029	32	87	43	-	1,481	835	12	1	3	161
Mannar	23,975	5,700	6,644	661	1,192	3,834	1,302	-	1,666	2,785	32	2	42	115
Vavuniya	41,908	19,540	8,517	1,623	880	1,171	1,522	275	7,256	134	8	38	912	32
Mullaitivu	24,896	8,153	8,242	6,462	60	100	141	-	1,088	210	48	-	4	388
Eastern Province														
Batticaloa	134,966	77,504	29,831	2,965	4,110	4,762	802	796	12,184	210	994	135	78	595
Ampara	165,166	44,011	33,011	7,436	35,590	24,812	5,607	10,148	2,375	168	755	83	39	1,131
Trincomalee	96,951	26,911	22,617	3,175	15,596	15,106	4,170	1,001	1,408	4,425	1,090	12	81	1,359
North Western Province														
Kurunegala	443,349	230,275	111,409	25,653	15,640	6,355	4,656	34,950	9,312	142	2,389	343	444	1,781
Puttalam	202,796	57,030	34,591	3,661	17,626	13,074	5,545	19,864	34,696	3,961	491	715	3,445	8,097
North Central Province														
Anuradhapura	231,356	50,933	64,063	7,811	33,806	17,571	8,164	35,054	5,941	205	3,138	1,259	2,504	907
Polonnaruwa	111,010	29,968	25,434	7,627	12,098	8,554	2,979	18,437	3,273	28	1,620	174	480	338
Uva Province														
Badulla	214,900	29,028	27,523	12,707	28,328	15,963	7,813	45,155	2,198	106	44,812	205	40	1,022
Monaragala	120,137	25,872	20,186	7,076	15,009	13,785	4,251	20,424	5,483	69	6,892	79	21	990
Sabaragamuwa Province														
Ratnapura	285,893	49,680	37,636	14,384	28,830	24,976	12,868	75,632	4,235	399	34,825	111	34	2,283
Kegalle	220,749	68,467	43,135	15,886	30,653	9,768	7,871	18,819	535	37	22,864	62	13	2,639

Source : Census of Population and Housing, 2012

Note : ' * ' Refers to piped born water distributed through pipe lines by National Water Supply and Drainage Board or the Local Government Institution.

Table 6. Households in Occupied Housing Units by Type of Toilet Facility and District, 2012

Province/District	Total Households	Type of Toilet			
		Exclusive	Shared	Common	Not Using a Toilet
Sri Lanka	5,264,282	4,565,611	574,303	36,088	88,280
Western Province					
Colombo	572,475	509,447	43,101	19,602	325
Gampaha	604,009	529,623	72,180	1,447	759
Kalutara	305,737	279,716	24,776	458	787
Central Province					
Kandy	348,019	312,932	31,740	1,639	1,708
Matale	129,710	112,819	15,969	231	691
Nuwara Eliya	181,182	144,939	27,164	2,019	7,060
Southern Province					
Galle	273,140	246,407	25,192	502	1,039
Matara	206,790	187,602	18,289	462	437
Hambantota	156,476	138,062	17,728	58	628
Northern Province					
Jaffna	140,323	114,174	17,033	1,866	7,250
Mannar	23,975	17,471	3,657	342	2,505
Vavuniya	41,908	31,860	5,133	1,898	3,017
Mullaitivu	24,896	15,764	3,844	148	5,140
Kilinochchi	28,369	17,560	4,539	64	6,206
Eastern Province					
Batticaloa	134,966	99,173	18,523	345	16,925
Ampara	165,166	142,438	18,194	191	4,343
Trincomalee	96,951	75,723	16,516	1,071	3,641
North Western Province					
Kurunegala	443,349	391,708	46,208	869	4,564
Puttalam	202,796	172,310	22,973	988	6,525
North Central Province					
Anuradhapura	231,356	193,611	32,347	189	5,209
Polonnaruwa	111,010	94,835	13,906	135	2,134
Uva Province					
Badulla	214,900	183,329	28,963	402	2,206
Monaragala	120,137	104,608	13,027	186	2,316
Sabaragamuwa Province					
Ratnapura	285,893	248,948	34,647	648	1,650
Kegalle	220,749	200,552	18,654	328	1,215

Source : Census of Population and Housing, 2012

Table 7. Distribution of Government Medical Institutions and Beds by Regional Director of Health Services Division, December 2014

RDHS Division	Teaching Hospital		Provincial General Hospital		District General Hospital		Base Hopital Type A		Base Hopital Type B		Divisional Hospital Type A		Divisional Hospital Type B		Divisional Hospital Type C		Primary Medical Care Unit and Maternity Home		Other Hspitals[1]		Total Hospitals		Beds per 1,000 Population	Primary Medical Care Units	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	8,214					2	1,045	1	306	1	105	5	354	3	117	5	62	9	3,988	33	14,191	6.0	28	13
Gampaha	1	1,527			2	1,569	1	606	2	278	4	597	1	79	6	200			5	1,173	22	6,029	2.6	46	16
Kalutara					1	844	3	1,018	1	166	2	193	8	596	6	175					21	2,992	2.4	8	13
Kandy	3	3,759			1	473			2	467			14	1,005	33	1,055			6	232	59	6,991	5.0	28	23
Matale					1	819	1	305					3	210	15	411					20	1,745	3.5	15	13
Nuwara Eliya					1	449	1	120	1	157	2	243	8	590	14	382					27	1,941	2.6	21	13
Galle	2	2,241					2	813	1	139	2	219	7	510	9	264	2	28	1	9	26	4,223	3.9	24	20
Matara					2	1,146			2	419	2	210	6	478	5	126					17	2,379	2.9	21	17
Hambantota					1	660	1	278	2	336			9	673	8	236					21	2,183	3.5	13	12
Jaffna	1	1,337					2	602	2	280			4	314	18	466					27	2,999	5.1	16	12
Kilinochchi					1	283			1	52			1	98	6	176					9	609	5.2	2	4
Mullaitivu					1	176			2	85	2	135	2	53	4	64					11	513	5.5	7	5
Vavuniya					1	656			1	153			1	41	6	69					9	919	5.2	3	4
Mannar					1	331							4	332	6	143					11	806	7.8	5	5
Batticaloa	1	938							4	591			5	356	10	315	3	46	1	3	24	2,249	4.2	13	14
Ampara					1	616			2	279					7	260					10	1,155	4.7 [a]	14	7
Kalmunai							3	1,020	2	266			5	395	7	253	4	54			21	1,988		8	13
Trincomalee					1	630	1	273	3	314					11	398	1	17			17	1,632	4.2	16	11
Kurunegala			1	1,846			1	646	3	757	9	1,022	11	843	21	526	1	11			47	5,651	3.4	54	29
Puttalam					1	583	1	361	1	359	2	252	4	238	6	193	2	53			17	2,039	2.6	30	12
Anuradhapura	1	1,992							3	403	4	452	10	591	21	680			1	15	40	4,133	4.7	21	19
Polonnaruwa					1	801			2	238	1	100	4	241	4	126					12	1,506	3.6	14	7
Badulla [2]			1	1,493			2	696	1	134	2	230	7	484	34	605					47	3,642	4.4	17	16
Monaragala					1	453			3	424			6	466	8	242					18	1,585	3.4	10	11
Ratnapura			1	1,242	1	467			3	605	7	660	8	404	15	325			1	8	36	3,711	3.3	17	18
Kegalle					1	814			3	755	5	493	1	53	8	149			2	30	20	2,294	2.7	24	11
Total	16	20,008	3	4,581	20	11,770	21	7,783	48	7,963	45	4,911	134	9,404	291	7,956	18	271	26	5,458	622	80,105	3.9	475	338

[a] Included Kalmunai data

Source : Medical Statistics Unit

[1] Teaching Hospitals: Institute of Cancer, Mental and Dental hospitals are categorized under "Other Hospitals"

[2] Eleven (11) Divisional Hospitals (DHC's) in Badulla RDHS area which have no indoor facilities are also included

Table 8. Beds by Speciality and Regional Director of Health Services Division, December 2014

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 Surgery	Plastic Surgery/Burns Unit	Rheumatology/Rehabilitation	Dental	Others [3]	Total
Colombo	1,496	2,204	1,660	1,950	1,750	14	35	792		1,573	338	96	176	141	495	57	535	202	53		12	612	14,191
Gampaha	282	1,310	963	682	920		406		39	238	23	42	10	40	290		46			272		466	6,029
Kalutara	377	703	439	551	517					43			67		26	15	52					202	2,992
Kandy	337	1,740	827	1,134	1,144		82	155		202	134	46	88	87	195	41	244	77		26	50	382	6,991
Matale	138	583	209	233	344					43				16	61	19	31					68	1,745
Nuwara Eliya	291	507	192	274	498					34				13	31							101	1,941
Galle	272	972	577	595	786	7	19	199		85	58	20	25	41	96	38	56	93		32	21	231	4,223
Matara	101	663	363	382	497	15				32	19		16	29	44	27	21			41		129	2,379
Hambantota	181	611	340	317	482					12				23	31		34				42	110	2,183
Jaffna	169	781	536	394	527		20	96		85	13		22		73	21				9		253	2,999
Kilinochchi	24	181	70	87	201					10												36	609
Mullaitivu	133	128	45	83	83																	41	513
Vavuniya	9	193	151	129	251		17			30				24	42		37					36	919
Mannar	6	328	57	103	196					19					34							63	806
Batticaloa	214	560	353	398	373		15	17		39			5	34	38	13	54					136	2,249
Ampara	112	345	133	194	217	7				28					32		26					61	1,155
Kalmunai	5	625	271	378	444					36	19				30							180	1,988
Trincomalee	98	428	290	230	371		12			25					53	1						124	1,632
Kurunegala	753	1,502	585	790	1,042			42		34	46	42	16	46	107	47	115	60		36	40	348	5,651
Puttalam	115	590	305	285	464	30	16				3				50	7	34					140	2,039
Anuradhapura	592	1,108	436	549	754	32		69		51	66	29	38		30	24	70			11		274	4,133
Polonnaruwa	288	351	134	200	290	1				10		7			51	8	58					108	1,506
Badulla	355	917	523	480	654			116		73	49		30	44	66	23	103			21	29	159	3,642
Monaragala	192	447	162	299	347										40							98	1,585
Ratnapura	349	989	490	607	776	4	22	13		32	25	24	20	22	76	26	58				20	158	3,711
Kegalle	60	834	302	369	480					20				33	42							154	2,294
Total	6,949	19,600	10,413	11,693	14,408	110	644	1,499	39	2,754	793	306	513	593	2,033	367	1,574	432	53	448	214	4,670	80,105

Includes:

Source : Medical Statistics Unit

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

[2] Beds in 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, 1990 - 2014

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
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	1475[4]	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	1398[4]	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	1436[4]	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	1510[4]	7.5	5,821	28.6	2,605	12.8
2013	16,690	81.5	1,279	6.2	1,064	5.2	35,629	173.9	322	1.6	1,763	8.1	5,950	29.0	2,848	13.9
2014	17,615	84.8	1,360	6.5	999	4.8	38,451	185.1	277	1.3	1,526	7.3	5,954	28.7	2,888	13.9

* 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

[4] Excludes Supervising Public Health Inspectors

N/A - Not Available (2011 analysis is processing)

Note : All PGIM trainees were included 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 2014

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, etc.)	Medical Officers in RDHS/MOH/AMOH	School Medical Officers	Medical Officers (Malaria)	Medical Officers (Filaria)	Medical Officers (Leprosy)	Medical Officers (Venereal Diseases)	Medical Officers (Tuberculosis)	Epidemiologists	Medical Officers (Maternal and Child Health)	Judicial Medical Officers	Medical Officers (Blood Bank)	Internee Medical Officers	P.G.I.M. Trainees **	Other Medical Officers	Medical Officers [1]	Total Medical Officers [2]					
Colombo	90	463	2,853	57	4	3	6	-	15	-	7	10	7	66	236	402	158	3,824	4,377	4	30	214	25	273
Gampaha	13	123	1,147	58	-	-	1	-	5	-	1	2	5	37	135	1	53	1,445	1,581	2	4	80	3	89
Kalutara	6	65	500	40	-	-	1	-	3	3	-	1	3	22	63	6	30	672	743	1	3	55	7	66
Kandy	19	152	1,195	46	1	-	-	-	5	-	1	3	1	-	171	38	28	1,489	1,660	1	10	166	4	181
Matale	4	35	207	20	-	1	-	-	2	4	1	2	3	8	40	3	24	315	354	-	1	27	1	29
Nuwara Eliya	3	33	190	20	-	-	-	-	-	3	2	-	3	4	20	-	4	246	282	3	1	26	-	30
Galle	9	120	612	35	2	-	2	-	-	-	1	1	-	25	98	4	15	795	924	2	4	53	-	59
Matara	3	39	366	30	-	-	1	-	3	-	1	2	2	11	57	-	21	494	536	3	2	27	-	32
Hambantota	5	46	256	17	-	-	-	-	1	2	1	-	4	10	36	-	3	330	381	1	2	26	-	29
Jaffna	8	59	322	16	1	-	-	-	2	2	1	1	2	6	54	32	2	441	508	1	1	38	33	73
Kilinochchi	-	2	76	6	-	1	-	-	-	-	-	-	-	-	-	-	-	83	85	-	2	2	-	4
Mannar	2	14	65	6	-	1	-	1	1	1	1	1	-	2	-	-	3	82	98	4	-	9	-	13
Vavuniya	1	25	97	5	-	2	1	1	2	3	1	1	2	4	20	16	1	156	182	8	-	5	-	13
Mullaitivu	-	-	48	4	-	-	-	-	-	-	-	-	1	2	-	-	-	55	55	1	-	4	-	5
Batticaloa	7	37	222	14	-	-	1	-	-	1	1	1	1	8	48	3	14	314	358	3	2	26	1	32
Ampara	2	32	236	11	-	1	-	-	2	3	-	1	1	12	24	-	5	296	330	1	1	23	-	25
Trincomalee	5	32	202	11	-	1	-	-	1	2	1	1	3	5	46	1	8	282	319	-	7	14	-	21
Kalmunai	5	15	225	12	-	1	-	-	1	1	-	1	3	11	6	-	12	273	293	2	-	26	-	28
Kurunegala	10	75	762	56	-	-	1	-	3	16	1	1	7	16	127	6	33	1,029	1,114	2	4	76	6	88
Puttalam	4	51	306	23	-	-	-	-	2	2	-	-	8	10	51	2	9	413	468	3	1	22	1	27
Anuradhapura	5	76	388	27	-	4	-	-	3	4	1	1	2	2	48	-	44	524	605	1	3	30	1	35
Polonnaruwa	3	35	215	15	-	-	-	-	-	-	-	-	1	2	34	18	1	286	324	2	-	23	-	25
Badulla	7	63	387	25	-	1	-	-	5	-	1	2	2	10	80	1	29	543	613	2	-	54	6	62
Monaragala	3	26	164	14	-	1	-	-	1	1	1	1	1	5	30	-	28	247	276	4	-	21	-	25
Ratnapura	7	74	426	30	-	1	-	-	4	5	-	-	2	8	67	5	7	555	636	4	2	57	-	63
Kegalle	6	39	348	20	1	-	-	-	-	1	1	-	5	11	70	-	11	468	513	1	5	27	-	33
Total	227	1,731	11,815	618	9	18	14	2	61	54	25	33	69	297	1,561	538	543	15,657	17,615	56	85	1,131	88	1,360

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

[1] Total Medical Officers, exclude: Administrative and Specialists

[2] Total Medical Officers

[3] Total Dental Surgeons

Continued…

Source : Medical Statistics Unit

Table 10. Distribution of Health Personnel by Regional Director of Healh Services Division, December 2014

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 Technicians	Entomological Assistants
Colombo	135	62	289	52	7,546	26	787	8,762	9	12	1	7	26	55	360	472	252	157	44	39	18	30
Gampaha	98	24	94	15	2,534	28	259	2,954	3	2	-	8	29	42	114	98	37	52	17	31	1	4
Kalutara	64	8	69	11	1,380	23	474	1,965	2	1	-	3	12	18	52	55	15	9	4	26	1	5
Kandy	162	14	105	42	3,324	24	680	4,189	5	45	16	22	4	92	138	126	74	45	5	27	12	8
Matale	34	5	12	-	561	12	-	590	1	8	11	6	1	27	28	24	6	5	1	13	-	5
Nuwara Eliya	15	3	4	-	415	4	-	426	1	8	1	11	2	23	20	20	8	4	2	9	-	1
Galle	68	9	65	13	1,921	19	478	2,505	2	2	-	5	25	34	73	69	34	23	7	31	9	8
Matara	49	3	40	6	1,132	8	88	1,277	-	-	-	3	41	44	45	39	11	12	4	20	1	1
Hambantota	11	2	30	14	889	7	358	1,300	-	-	-	-	18	18	41	35	13	8	4	12	-	8
Jaffna	12	5	40	14	554	1	275	889	-	2	1	2	-	5	53	26	20	13	2	8	-	2
Kilinochchi	1	-	-	-	62	-	-	62	-	-	-	-	-	-	4	2	2	2	1	1	1	2
Mannar	5	1	6	-	103	-	-	110	-	-	-	-	1	1	7	6	2	1	-	1	-	2
Vavuniya	2	5	14	4	183	3	100	309	-	1	-	-	1	2	13	15	4	-	-	3	1	3
Mullaitivu	1	-	2	-	39	-	-	41	-	-	-	1	1	2	4	2	2	-	-	1	-	1
Batticaloa	10	7	34	10	576	14	171	812	-	9	-	1	3	13	36	29	12	10	3	3	-	2
Ampara	9	2	4	17	464	2	179	668	-	-	-	-	-	-	27	29	9	5	1	3	-	4
Trincomalee	11	4	8	-	272	1	-	285	-	1	-	-	-	1	16	15	4	7	1	3	-	5
Kalmunai	12	2	13	1	561	7	-	584	2	10	-	3	2	17	30	32	11	5	3	4	-	1
Kurunegala	95	16	91	42	2,209	32	563	2,953	6	-	2	23	77	108	87	86	29	23	2	40	2	2
Puttalam	21	4	34	-	576	3	-	617	-	-	-	3	8	11	39	38	9	7	1	12	1	4
Anuradhapura	29	14	64	18	1,124	9	509	1,738	1	-	1	2	13	17	53	47	19	12	2	15	2	4
Polonnaruwa	11	4	18	-	580	7	-	609	-	1	-	2	4	7	37	26	11	10	2	3	-	-
Badulla	42	4	59	13	1,115	13	322	1,526	1	1	-	10	15	27	59	51	21	17	3	13	1	3
Monaragala	10	5	10	-	461	11	-	487	-	1	-	7	34	42	25	24	7	5	-	12	-	5
Ratnapura	38	8	43	13	1,280	12	315	1,671	1	3	-	3	10	17	59	54	23	13	3	19	1	8
Kegalle	54	7	33	1	1,070	11	-	1,122	-	1	-	5	14	20	49	41	14	7	-	16	1	7
Total	999	218	1,181	286	30,931	277	5,558	38,451	34	108	33	127	341	643	1,469	1,461	649	452	112	365	52	125

Continued..

Source : Medical Statistics Unit

Table 10. Distribution of Health Personnel by Regional Director of Healh Services Division, December 2014

RDHS Division	Opthalmic 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 Technicians	Audiology Technicians	Workmen Technicians	Orthapidic Technicians	Cinema Technicians	Assistant Technicians	Attendants	Other
Colombo	50	6	11	221	17	498	329	74	21	31	85	15	47	-	5	-	5	2	1	1,516	12,060
Gampaha	16	3	9	109	10	509	165	21	4	32	81	14	-	-	2	-	1	1	-	448	2,920
Kalutara	7	2	5	62	16	386	159	9	2	2	44	16	-	-	1	-	-	1	-	383	1,275
Kandy	17	2	8	87	16	486	208	25	10	15	87	12	1	-	5	-	4	-	-	734	4,300
Matale	5	1	1	40	5	165	81	5	-	8	40	11	-	-	-	-	-	-	-	169	678
Nuwara Eliya	4	1	5	32	12	222	93	4	1	2	41	2	-	-	-	-	1	-	-	258	581
Galle	9	2	12	76	17	310	171	15	4	9	62	11	-	-	1	-	-	1	-	397	2,224
Matara	6	-	14	55	20	278	135	7	2	5	45	16	-	-	2	-	-	-	-	362	1,178
Hambantota	5	2	12	46	15	209	115	7	1	6	39	15	-	-	2	-	-	-	-	262	1,076
Jaffna	2	1	14	61	13	134	81	4	2	3	49	14	-	-	1	-	-	-	-	464	1,276
Kilinochchi	2	-	5	15	8	77	14	-	-	1	13	6	1	-	-	-	-	-	-	84	393
Mannar	1	1	2	19	1	54	35	-	-	-	12	7	-	-	-	-	-	-	-	105	406
Vavuniya	2	-	4	16	4	56	34	-	1	1	14	-	-	-	-	-	-	1	-	107	522
Mullaitivu	-	-	4	18	2	42	16	-	-	1	5	5	-	-	-	-	-	-	-	78	216
Batticaloa	2	1	8	58	10	153	88	9	1	2	35	57	-	-	2	-	-	-	-	143	987
Ampara	3	1	2	29	7	94	43	9	1	1	25	12	-	-	-	-	-	-	-	191	994
Trincomalee	2	-	8	39	12	115	57	2	-	4	27	30	-	-	-	-	-	1	-	243	742
Kalmunai	4	1	11	49	13	137	121	11	-	5	24	25	-	-	-	-	-	-	-	182	1,071
Kurunegala	6	2	23	108	33	444	243	15	4	33	102	28	-	-	1	-	3	-	-	722	3,081
Puttalam	4	2	9	36	12	192	77	6	2	8	41	18	-	-	-	-	-	-	-	132	885
Anuradhapura	4	2	10	70	18	248	133	10	5	31	80	20	-	-	1	-	-	1	-	413	1,925
Polonnaruwa	4	1	6	31	5	105	53	7	-	3	27	8	-	-	1	-	-	-	-	166	905
Badulla	8	1	12	59	13	270	116	11	2	10	81	-	-	-	1	-	5	-	-	352	2,008
Monaragala	2	-	8	33	12	176	66	5	-	3	38	15	-	-	1	-	1	-	-	233	829
Ratnapura	9	2	17	83	22	326	135	10	2	12	52	12	-	-	2	-	-	1	-	408	2,194
Kegalle	6	3	12	74	9	268	120	5	-	9	44	13	-	-	-	-	-	-	-	235	1,542
Total	180	37	232	1,526	322	5,954	2,888	271	65	237	1,193	382	49	-	28	-	20	9	1	8,787	46,268

Source : Medical Statistics Unit

Table 11. Distribution of Specialists in Curative Care Services[1] by Regional Director of Health Services Division, December 2014

RDHS Division	General Physicians	General Surgeons	Obstetricians & Gynaecologists	Cardiologists	Chest Physicians	Thoracic Surgeons	Neurologists	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	Biochemists	Oncologists/Radiotherapists	Oncology Surgeons	Radiologists	Venereologists	Mycologists	Public Health/Community Health Physicians	Specialist Dental Surgeons-Orthodontists	Specialist Dental Surgeons-Maxillofacial/Restorative	Others [2]
Colombo	57	37	37	17	-	9	8	7	8	5	25	35	4	7	16	13	6	4	42	24	12	11	6	14	3	27	1	-	19	4	9	46
Gampaha	26	15	14	3	4	3	3	-	5	5	9	20	-	5	6	2	1	1	10	10	6	3	-	-	-	7	-	-	5	2	4	11
Kalutara	9	5	6	1	1	-	1	-	3	1	3	7	-	2	3	1	-	-	5	3	3	-	-	-	-	4	1	-	-	1	2	2
Kandy	21	18	15	7	4	3	3	2	5	2	8	23	2	5	4	4	1	2	17	12	4	5	8	4	-	10	1	-	10	2	1	19
Matale	5	4	4	-	1	-	-	-	2	-	2	3	-	1	2	1	-	-	2	2	1	-	-	-	-	2	-	-	-	-	1	1
Nuwara Eliya	5	5	4	-	1	-	-	-	2	1	1	4	-	1	2	-	-	-	1	1	1	-	-	-	-	3	-	-	-	-	-	1
Galle	24	11	7	6	2	1	4	2	4	2	8	20	2	2	4	2	1	2	13	11	3	3	1	4	2	7	-	-	4	1	2	10
Matara	5	3	3	1	1	-	1	-	2	1	1	5	-	1	1	1	-	-	3	1	1	1	-	-	-	3	-	-	-	1	1	3
Hambantota	6	5	5	1	1	-	-	-	2	1	2	6	-	1	1	1	-	-	4	2	-	1	-	-	-	4	-	-	-	1	-	1
Jaffna	10	7	5	3	1	-	2	1	2	-	1	5	1	1	2	2	1	1	4	1	1	1	-	3	1	5	-	-	-	1	-	2
Kilinochchi	3	4	3	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Vavuniya	3	2	2	1	1	1	-	-	1	-	1	1	-	1	-	1	-	-	2	1	1	-	-	-	-	2	-	-	-	-	1	6
Mannar	2	2	2	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	2	1	1	-	-	-	-	1	-	-	-	-	-	-
Batticaloa	4	3	3	1	1	-	-	1	-	-	-	3	1	1	1	1	1	1	2	1	1	1	-	1	1	1	-	-	-	-	1	2
Ampara	5	4	4	1	1	-	1	-	1	-	1	4	-	1	1	-	-	-	1	2	1	-	-	-	-	2	-	-	-	-	1	1
Kalmunai	4	4	5	-	-	-	-	-	-	-	1	3	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Trincomalee	6	4	4	1	1	-	-	-	2	-	1	5	-	1	1	1	-	-	3	1	1	-	-	-	-	1	-	-	-	-	-	2
Kurunegala	9	6	9	2	-	-	1	-	3	1	3	8	1	2	1	2	-	-	5	3	3	1	-	1	-	4	-	-	-	-	3	7
Puttalam	7	5	6	1	1	-	-	-	3	-	1	5	-	2	3	1	-	-	3	2	1	1	-	-	-	3	-	-	-	1	-	12
Anuradhapura	10	4	3	1	1	-	2	1	2	1	1	6	1	2	2	2	1	1	4	2	1	1	-	2	1	3	2	-	-	1	1	3
Polonnaruwa	4	3	3	1	1	-	1	-	1	-	1	2	-	1	1	1	-	-	2	1	1	1	-	-	-	2	-	-	-	-	1	3
Badulla	8	5	5	1	1	-	1	1	3	1	2	6	-	2	1	2	-	1	4	3	1	1	-	2	1	4	-	-	-	-	1	4
Monaragala	4	3	3	-	-	-	-	-	1	-	1	3	-	1	1	1	-	-	2	1	1	-	-	-	-	1	-	-	-	-	-	1
Ratnapura	8	6	6	1	1	-	1	-	3	1	3	7	-	2	2	2	-	1	4	4	2	1	-	1	1	4	-	-	-	1	1	5
Kegalle	6	4	4	2	1	-	-	-	4	-	1	6	-	2	1	1	-	-	4	2	1	-	-	-	-	1	-	-	-	1	1	1
Total	251	169	162	52	26	17	29	15	61	22	78	190	12	45	57	42	12	14	139	92	49	32	15	32	10	103	5	-	38	17	31	143

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, 2008 - 2014

Item	2008	2009	2010	2011	2012	2013	2014
National Expenditure (Rs. million)	996,126	1,747,064	1,751,113	1,961,053	2,192,234	2,411,606	2,601,723
Health Expenditure (National + Provincial) (Rs. million)	68,604	67,448	80,027	82,179	89,291	120,346	155,008
Health Expenditure as a Percent of National Expenditure	6.89	3.86	4.57	4.19	4.07	4.99	5.96
Per Capita Health Expenditure (Rs.)	3,393	3,298	3,875	3,938	4,392	5,875	7,497
GNP (Rs. billion)	4,312	4,769	5,530	6,472	7,434	8,439	9,545
Health Expenditure as a Percent of GNP	1.59	1.41	1.45	1.26	1.20	1.43	1.62

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

Table 13. Summary of Health Expenditure and Source of Fund, 2008 - 2014

(Rs. Million)

Item	2008	2009	2010	2011	2012	2013	2014
Total Health Expenditure (National + Provincial)							
Recurrent Expenditure	57,956	57,953	67,213	69,801	74,184	100,968	130,360
Capital Expenditure	10,649	9,495	12,814	12,378	15,107	19,378	24,648
	68,605	67,448	80,027	82,179	89,291	120,346	155,008
Source of Fund							
Consolidated Fund	65,677	65,286	74,048	79,433	81,781	111,988	136,123
Foreign Aid	2,927	2,162	5,979	2,745	7,510	8,358	18,885
	68,604	**67,448**	**80,027**	**82,179**	**89,291**	**120,346**	**155,008**

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

Table 14. Summary of Health Expenditure by Programme, 2014

(Rs. Million)

Programme	Health Expenditure 2014			
	Ministry of Health	Department of Ayurveda	Provincial Health	Total
Recurent Expenditure				
01. Operational Activities	**82,261.04**	**89.27**		
Minister's Office	132.19			
Ministry Administration and Establishment Services	3,819.13			
Medical Supply Division	35,114.53			
Hospital Operations	43,195.19			
02. Development Activities	**8,452.75**	**731.87**		
Human Resource Development	5,709.81			
Health Promotion and Disease Prevention	729.58			
National Nutrition Programme	1,787.05			
Medical Research	225.98			
Clinical Trials Regulatory Division	0.33			
Total	**90,713.79**	**821.14**	**38,825.12**	**130,360.05**
Capital Expenditure				
01. Operational Activities	**4,328.66**	**9.85**	**-**	**-**
Minister's Office	19.06			
Ministry Administration and Establishment Services	513.94			
Medical Supply Division	37.47			
Hospital Operations	3,758.19			
02. Development Activities	**17,527.68**	**348.12**	**-**	**-**
Human Resource Development	200.97			
Relief and Reconstruction in Tsunami Affected Areas	18.27			
Hospital Development Projects	14,885.87			
Health Promotion and Disease Prevention	846.46			
Control of Communicable and Non Communicable Diseases	1,311.74			
National Nutrition Programme	45.94			
Medical Research	105.02			
Clinical Trials Regulatory Division	0.57			
Promotion of Indigenous Medicine	112.84			
Total	**21,856.34**	**357.97**	**2,433.69**	**24,648.00**
Total Health Expenditure				
01. Operational Activities	**86,589.70**	**99.12**	**-**	**-**
Minister's Office	151.25			
Ministry Administration and Establishment Services	4,333.07			
Medical Supply Division	35,152.00			
Hospital Operations	46,953.38			
02. Development Activities	**25,980.43**	**1,079.99**	**-**	**-**
Human Resource Development	5,910.78			
Relief and Reconstruction in Tsunami Affected Areas	18.27			
Hospital Development Projects	14,885.87			
Health Promotion and Disease Prevention	1,576.04			
Control of Communicable and Non Communicable Diseases	1,311.74			
National Nutrition Programme	1,832.99			
Medical Research	331.00			
Clinical Trials Regulatory Division	0.90			
Promotion of Indigenous Medicine	112.84			
Total	**112,570.13**	**1,179.11**	**41,258.81**	**155,008.05**

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

Table 15. Indoor Morbidity and Mortality Statistics by Broad Disease Groups, 2014

	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)	128,733	47.9	52.1	10.2	23.1	16.9	24.9	15.8	8.9	-	58
2	Tuberculosis (A15-A18)	8,619	69.9	30.1	0.3	0.8	2.1	39.9	43.2	13.7	-	328
3	Other bacterial diseases (A20-A49)	19,538	68.4	31.6	14.2	7.7	8.2	40.3	22.4	7.1	0.1	3,871
4	Infections with sexual mode of transmission (A50-A64)	585	50.9	49.1	1.4	0.3	4.3	65.0	24.7	3.8	0.5	2
5	Viral diseases (A80-B34)	269,894	56.3	43.7	5.1	13.4	17.2	44.6	14.8	4.8	0.1	186
6	Malaria (B50-B54)	75	65.3	34.7	4.0	10.7	9.3	34.7	33.3	8.0	-	-
7	Helminthiases (B76,B77,B79,B80)	115	53.0	47.0	2.6	26.1	33.0	21.7	14.8	1.7	-	-
8	Other infectious and parastic diseases	9,140	51.2	48.8	5.3	12.1	15.4	44.2	18.1	4.8	0.1	12
9	Neoplasms (C00-D48)	112,157	43.5	56.5	0.3	2.4	4.6	29.5	49.5	13.6	-	4,995
10	Iron dificiency anaemias (D50)	6,360	35.1	64.9	0.9	3.0	5.9	35.0	33.9	21.0	0.3	16
11	Haem. con. and other diseases of blood and ... (D51-D89)	25,809	47.6	52.4	2.3	8.0	21.8	31.5	22.0	14.4	-	86
12	Diabetes mellitus (E10-E14)	81,375	46.2	53.8	-	0.1	1.1	27.0	54.2	17.4	0.2	671
13	Malnutrition and vitamin deficiencies (E40-E46,E50-E56)	963	58.5	41.5	2.8	17.5	9.0	27.8	28.6	14.2	0.1	6
14	Oth eno, nutr and metabo... (E00-E07,E15-E34,E58-E89)	26,687	34.8	65.2	1.6	2.2	5.3	39.7	36.3	14.8	0.1	119
15	Mental and behavioural disorders (F00-F99)	47,137	57.4	42.6	-	0.2	3.3	62.7	27.3	5.7	0.7	-
16	Diseases of the nervous system (G00-G98)	66,478	50.1	49.9	2.6	5.0	11.4	42.7	27.2	11.0	0.2	592
17	Diseases of the eye and adnexa (H00-H59)	157,609	50.0	50.0	0.9	2.8	6.6	22.8	43.6	23.2	0.1	-
18	Dis of the ear.. (H60-H61,H65-H74,H80-H83,H90-H95)	41,541	48.4	51.6	4.5	12.8	18.5	35.3	22.0	6.9	-	-
19	Rheum. fever and rheum. heart dis. (I00-I02,I05-I09)	4,092	42.2	57.8	-	1.2	13.8	36.9	36.2	11.4	0.5	35
20	Hypertensive diseases (I10-I15)	99,224	41.7	58.3	-	-	-	20.6	48.4	30.4	0.5	649
21	Ischaemic heart disease (I20-I25)	108,905	55.4	44.6	-	-	0.2	19.3	53.0	27.3	0.2	6,346
22	Other heart diseases (I26-I51)	39,667	52.6	47.4	0.3	0.3	1.2	21.0	45.9	31.2	0.1	3,685
23	Cerebroavascular disease (I60-I69)	42,233	60.1	39.9	-	0.1	0.3	11.5	47.4	40.4	0.2	3,578
24	Other diseases of the circulatory system (I70-I84)	42,256	60.0	40.0	0.1	0.7	1.9	41.1	43.2	12.9	0.1	171
25	Influenza (J10-J11)	1,952	47.1	52.9	4.5	11.0	14.0	38.3	22.3	9.9	-	2
26	Pneumonia (J12-J18)	23,062	54.8	45.2	12.1	18.9	10.8	18.3	24.7	15.1	0.1	2,802
27	Other dise. of the upper respir. tract (J00-J06,J30-J39)	122,424	51.3	48.7	11.3	22.4	18.0	26.6	15.2	6.4	0.1	42
28	Diseases of the resp. system exclu... (J20-J22, J40-J98)	443,916	53.1	46.9	8.5	14.4	13.6	20.3	26.4	16.7	0.1	3,415
29	Diseases of teeth and supporting structure (K00-K014)	16,126	54.8	45.2	0.7	11.0	20.7	39.5	21.7	6.4	-	-
30	Diseases of the gastrointestional tract (K20-K92)	291,881	54.4	45.6	0.8	3.2	10.3	45.3	29.5	10.9	0.1	2,417
31	Diseases of skin ad subcutaneous tissue (L00-L08,L10-L98)	215,798	56.3	43.7	2.0	6.5	10.3	37.2	31.6	12.4	0.1	60
32	Disorders of the musculoskeletal system (M00-M99)	161,412	52.4	47.6	0.1	1.1	8.0	45.0	33.2	12.5	0.1	63
33	Diseases of the urinary system (N00-N39)	217,698	55.8	44.2	1.7	4.0	6.7	44.8	30.2	12.5	0.1	2,696
34	Diseases of breast (N60-N64)	12,634	9.6	90.4	1.1	1.2	3.9	67.7	21.5	4.7	-	-
35	Diseases of the male genital organs (N40-N50)	20,678	100.0	-	1.0	7.8	12.6	30.8	29.7	18.0	0.1	7
36	Disor. of female genito-urinary sys. (N70-N98, N99.2, N99.3)	81,602	-	100.0	0.1	0.3	2.8	72.0	21.2	3.6	-	8
37	Abortions (O00-O08)	48,813	-	100.0	-	-	0.7	99.0	-	-	0.3	9
38	False labour (O47)	14,485	-	100.0	-	-	0.6	99.3	-	-	0.1	-
39	Other obstetric conditions and those admitted...	251,921	-	100.0	-	-	0.4	99.4	-	-	0.2	24
40	Single sponteaneous dilivery (O80)	209,259	-	100.0	-	-	0.3	99.6	-	-	0.1	-
41	Slow fetal growth, fetal malnutrition and... (P05-P07)	7,434	49.1	50.9	94.3	2.1	-	-	-	-	3.6	571
42	Other conditions originating in the perinatal period (P00-P04, P08-P96)	37,119	51.6	48.4	93.4	4.5	-	-	-	-	2.1	690
43	Congenital malformations deformations... (Q00-Q99)	12,193	57.3	42.7	35.6	33.3	14.5	12.2	3.7	0.6	0.1	598
44	Signs, symptoms and abnormal clinical findings (R00-R99)	529,603	49.3	50.7	3.2	7.7	12.1	39.9	25.6	11.4	0.1	1,364
45	Traumatic injuries (S00-T19, W54)	907,241	66.6	33.4	0.7	6.9	17.1	49.7	19.5	6.1	0.2	1,514
46	Burns and corrosion (T20-T32)	15,256	55.5	44.5	2.7	23.1	16.8	40.0	13.6	3.7	0.1	167
47	Toxic effects of pesticides (T60.0,T60.1-T60.9)	16,756	60.8	39.2	0.5	4.6	9.7	70.1	12.7	2.2	0.2	423
48	Snake bites (T63.0)	37,309	61.1	38.9	0.3	2.8	11.8	54.6	26.0	4.4	0.1	94
49	Tox. effe. of ot. sub. oth tha.. (T36-T59,T61-T62,T63.1-T65)	59,175	48.0	52.0	1.0	8.3	15.2	60.3	12.4	2.8	0.1	239
50	Effects of unspecified external causes... (T33-T35,T66-T79)	48,128	52.0	48.0	1.9	7.5	19.8	43.1	20.5	7.2	0.1	112
51	Complications of surgical and medical care... (T80-T88)	10,988	51.0	49.0	3.7	6.3	12.8	43.5	25.3	8.2	0.1	14
52	Sequelae of injuries, poisoning and of other... (T90-T98)	3,889	58.9	41.1	1.7	6.2	13.4	50.0	20.9	7.8	0.1	8
53	Persons encountering health services.... (Z00-Z13,Z40-Z54)	584,206	52.7	47.3	3.3	5.4	10.4	39.7	28.6	12.4	0.2	-
54	Sterilizations (Z30.2)	5,765	2.3	97.7	-	-	-	97.1	2.3	-	0.6	-
55	Undiagnosed/Uncoded	372,555	53.0	47.0	2.8	3.5	7.8	48.2	27.4	10.1	0.2	4,672
	Total	6,120,470	49.2	50.8	3.3	6.4	10.3	44.6	24.8	10.5	0.2	47,417

* Total = (Number of Live Discharges + Deaths)

Source : Medical Statistics Unit

Table 16. Trends in Hospital Morbidity and Mortality by Broad Disease Groups, 2006 - 2014

Disease Group by International Classification of Diseases (10th Revision)	Morbidity (Cases per 100,000 population)								Mortality (Cases per 100,000 population)							
	2006	2007	2008	2009 [5]	2010 [6]	2012	2013	2014	2006	2007	2008	2009 [5]	2010 [6]	2012	2013	2014
1. Certain infectious and parasitic diseases (A00-B99)	2,153.6	2,034.8	2,477.8	2,976.1	2,693.2	2,364.5	2,208.0	2,102.4	11.5	12.3	13.7	15.5	17.2	16.6	18..4	21.5
2. Neoplasms (C00-D48)	289.7	329.0	359.2	368.8	403.2	470.9	477.8	540.0	16.3	17.5	17.2	18.5	21.5	22.2	22.2	24.0
3. Diseases of the blood & blood- forming organs & certain disorders involving the immune mechanism (D50-D89)	84.7	95.7	97.2	113.4	124.6	138.8	144.7	154.9	0.5	0.3	0.4	0.5	0.6	0.5	0.5	0.5
4. Endocrine, nutritional and metabolic diseases (E00-E90)	377.5	401.6	394.8	455.3	465.1	518.3	535.9	524.9	3.4	3.2	3.3	4.0	4.0	4.0	3.7	3.8
5. Mental and behavioural disorders (F00-F99)	211.1	201.6	199.8	195.2	213.7	223.2	227.6	226.9	-	-	-	-	-	-	-	-
6. Diseases of the nervous system (G00-G99)	274.7	293.3	290.0	308.4	313.8	329.3	323.9	320.1	2.7	2.7	2.6	3.2	3.0	2.9	2.9	2.9
7. Diseases of the eye and adnexa (H00-H59)	458.1	512.0	580.7	648.4	646.7	697.9	699.6	758.8	-	-	-	-	-	-	-	-
8. Diseases of the ear and mastoid process (H60-H95)	108.9	129.4	141.2	161.9	168.9	184.9	197.8	200.0	-	-	-	-	-	-	-	-
9. Diseases of the circulatory system (I00-I99)	1,266.6	1,364.6	1,382.9	1,436.7	1,490.1	1,573.1	1,588.4	1,619.5	55.6	59.9	59.0	60.6	63.1	65.4	66.6	69.6
10. Diseases of the respiratory system (J00-J99)	2,536.2	2,399.0	2,745.5	2,910.3	2,873.7	2,892.7	2,939.3	2,847.0	18.7	18.5	25.0	21.9	24.1	25.2	28.1	30.1
11. Diseases of the digestive system (K00-K93)	1,132.5	1,188.1	1,190.2	1,295.6	1,375.5	1,439.3	1,440.6	1,482.9	11.3	12.1	12.4	12.3	12.0	10.4	11.2	11.6
12. Diseases of the skin and subcutaneous tissue (L00-L99)	664.7	730.5	725.6	874.4	901.7	970.0	952.4	1,038.9	-	-	-	-	-	0.1	0.2	0.3
13. Diseases of the musculoskeletal system and connective tissue (M00-M99)	604.8	614.4	643.0	689.3	708.3	789.7	768.6	777.1	0.6	0.2	0.2	0.3	0.2	0.3	0.3	0.3
14. Diseases of the genitourinary system (N00-N99)	1,254.8	1,325.8	1,273.8	1,411.0	1,506.8	1,578.3	1,567.0	1,601.3	7.8	9.1	9.1	10.7	11.1	12.1	12.4	13.1
15. Pregnancy, childbirth and the puerperium [1,4] (O00-O99)	4,241.8	4,521.3	4,316.0	4,528.6	4,613.9	5,299.6	5,389.3	5,266.0	0.9	1.4	1.5	1.1	1.0	0.9	1.0	0.6
16. Certain conditions originating in the perinatal period [2,3] (P00-P96)	-	-	-	-	-	9,188.4	11,448.5	12,729.4	-	-	-	-	-	222.2	389.2	360.3
17. Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	59.9	63.9	64.1	58.5	61.9	55.8	63.0	58.7	2.7	2.8	3.0	2.9	3.1	2.6	2.7	2.9
18. Symptoms,signs and abnormal clinical and laboratory findings not elsewhere classified (R00-R99)	1,545.5	1,633.4	1,827.6	2,180.2	2,143.7	2,300.1	2,430.2	2,549.7	7.7	9.1	8.3	10.5	9.7	8.6	9.4	6.6
19. Injury, poisoning and certain other consequences of external causes (S00-T98)	3,809.0	4,090.0	4,200.6	4,585.4	4,832.9	5,316.3	5,210.7	5,289.8	17.4	17.1	14.8	17.2	15.2	13.9	12.5	12.4

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

[2] Per 100,000 live births / infant population

[3] Not calculated for the year 2006 - 2010 since infant population was not available

Excludes:

[4] Single spontaneous delivery, false labour and those admitted and discharged before delivery

[5] Kilinochchi and Mullaitivu districts

[6] Mullaitivu district

Source : Medical Statistics Unit

Table 17. Trends in Hospitalization and Hospital Deaths of Selected Diseases, 2005 - 2014

Disease and ICD Code		Number of Hospitalizations per 100,000 Population									Number of Deaths per 100,000 Population								
		2005	2006	2007	2008	2009	2010	2012	2013	2014	2005	2006	2007	2008	2009	2010	2012	2013	2014
Intestinal infectious diseases	(A00-A09)	670.7	692.9	706.8	627.5	791.6	732.4	634.4	607.5	619.8	2.2	0.4	0.4	0.4	0.5	0.4	0.2	0.3	0.3
Tuberculosis	(A15-A19)	43.1	37.1	35.2	34.9	38.3	48.7	39.0	40.6	41.5	1.7	1.4	1.4	1.4	1.4	2.2	1.5	1.6	1.6
Diphtheria	(A36)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whooping cough	(A37)	-	0.7	-	-	-	-	0.5	0.2	0.3	-	-	-	-	-	-	-	-	-
Septicaemia	(A40, A41)	18.2	20.1	20.3	23.7	27.1	28.2	33.6	38.1	44.2	5.9	7.1	8.5	9.0	10.2	11.5	12.6	14.4	17.5
Rabies	(A82)	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	0.1	0.0
Measles	(B05)	0.7	0.5	0.7	0.7	0.8	0.7	0.4	23.2	16.5	-	-	-	-	-	-	-	-	-
Viral hepatitis	(B15-B19)	18.5	20.1	33.1	15.2	45.3	14.5	15.9	16.1	15.2	-	0.1	-	-	-	-	-	-	-
Malaria	(B50-B54)	24.4	11.4	5.2	3.1	5.2	2.9	0.6	0.5	0.4	-	-	-	-	-	-	-	-	-
Helminthiasis	(B76, B77, B79, B80)	4.2	2.3	1.5	2.0	2.4	1.1	1.2	1.3	0.6	-	-	-	-	-	-	-	-	-
Diabetes mellitus	(E10-E14)	265.2	296.8	307.3	296.7	343.9	357.2	388.1	411.4	391.8	3.4	3.0	2.7	2.9	3.5	3.3	3.3	3.1	3.2
Nutritional deficiencies	(E40-E46, E50-E56)	11.7	6.9	7.2	7.9	9.1	6.5	7.6	7.9	4.6	0.2	0.1	0.1	0.1	0.2	0.1	-	-	-
Anaemias	(D50-D64)	69.6	68.7	74.5	77.2	87.8	96.6	105.6	111.9	121.7	0.3	0.4	0.2	0.3	0.4	0.4	0.3	0.4	0.4
Hypertensive disease	(I10-I15)	429.1	480.4	469.8	466.4	478.5	476.9	486.4	489.3	477.7	3.6	3.0	2.9	2.8	2.6	3.4	2.6	2.8	3.1
Ischaemic heart disease	(I20-I25)	353.9	399.9	427.1	423.0	450.4	478.2	494.9	506.1	524.3	19.1	20.7	22.7	22.1	23.7	24.8	27.6	29.1	30.6
Asthma	(J45)	817.3	910.4	893.5	970.2	973.8	948.2	928.0	910.8	916.3	4.3	3.8	3.6	4.1	3.3	3.7	3.1	3.0	2.9
Diseases of the liver	(K70-K76)	106.5	85.8	87.3	86.2	84.3	85.1	77.5	82.2	83.2	11.6	9.5	10.3	10.5	10.1	9.8	8.3	8.7	9.1
Abortions [1]	(O00-O08)	734.9	841.7	859.4	870.5	878.0	836.1	959.3	922.4	893.4	0.4	0.1	0.1	0.1	0.1	-	-	0.1	0.2

[1] Rate per 100,000 females of the reproductive age group

Source : Medical Statistics Unit

Table 18. Leading Causes of Hospitalization, 2014

Rank Order	ICD Code (10th Revision)	Causes of Hospitalization	Number of Cases	Proportionate Morbidity	Rate per 100,000 Population
1	S00 - T19, W54	Traumatic injuries	907,241	18.4	4,367.8
2	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	529,603	10.7	2,549.7
3	J20 - J22, J40 - J98	Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza	443,916	9.0	2,137.2
4	K20 - K92	Diseases of the gastrointestinal tract	291,881	5.9	1,405.2
5	A80 - B34	Viral diseases	269,894	5.5	1,299.4
6	O10 - O46, O48 - O75, O81 - O99, Z35	Direct and indirect obstetric causes	238,919	4.8	1,150.3
7	N00 - N39	Diseases of the urinary system	217,698	4.4	1,048.1
8	L00 - L99	Diseases of the skin and subcutaneous tissue	215,798	4.4	1,038.9
9	M00 - M99	Diseases of the musculoskelital system and connective tissue	161,412	3.3	777.1
10	H00 - H59	Diseases of the eye and adnexa	157,609	3.2	758.8
11	A00 - A09	Intestinal infectious diseases	128,733	2.6	619.8
12	J00 - J06, J30 - J39	Diseases of the upper respiratory tract	122,424	2.5	589.4
	A00 - T98, Z35, Z00 -Z13, Z30.2, Z40 - Z54, W54	All causes [1]	4,926,964	100.0	23,720.4

[1] Analysed all discharges (Live Discharges+Deaths) excluding ; 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, Undiagnosed/uncoded

Source : Medical Statistics Unit

Table 19. Leading Causes of Hospital Deaths, 2014

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	6,346	14.8	30.6
2	C00 - D48	Neoplasms[1]	4,995	11.7	24.0
3	A20 - A49	Zoonotic and other bacterial diseases	3,871	9.1	18.6
4	I26 - I51	Pulmonary heart disease and diseases of the pulmonary circulation	3,685	8.6	17.7
5	I60 - I69	Cerebrovascular disease	3,578	8.4	17.2
6	J20 - J22, J40 - J98	Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza	3,415	8.0	16.4
7	J12 - J18	Pneumonia	2,802	6.6	13.5
8	N00 - N39	Diseases of the urinary system	2,696	6.3	13.0
9	K20 - K92	Diseases of the gastrointestinal tract	2,417	5.7	11.6
10	S00 - T19, W54	Traumatic injuries	1,514	3.5	7.3
11	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	1,364	3.2	6.6
12	P00 - P04, P08 - P96	Conditions originating in the perinatal period excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition	690	1.6	3.3
13	E10 - E14	Diabetes mellitus	671	1.6	3.2
14	I10 - I15	Hypertensive disease	649	1.5	3.1
15	Q00 - Q99	Congenital malformations deformations	598	1.4	2.9
	A00-T98, Z00-Z13, Z35, Z40-Z54, W54	All causes [2]	42,745	100.0	205.8

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

[2] Analysed all deaths excluding undiagnosed/uncoded

Source : Medical Statistics Unit

Table 20. Leading Causes of Hospitalization, 2003 - 2014 [1]

Disease and ICD (10th Revision) Code		2014		2013		2012		2010		2009		2008		2007		2006		2005		2004		2003	
		Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Traumatic injuries	(S00-T19, W54)	1	18.5	1	18.1	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
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	2	10.8	2	10.4	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
Diseases of the respiratory system excluding diseases of upper the respiratory tract, pneumonia and influenza	(J20-J22, J40-J98)	3	9.0	3	9.4	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
Diseases of the gastro-intestinal tract	(K20-K92)	4	5.9	5	5.8	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
Viral diseases	(A80-B34)	5	5.5	4	6.0	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
Direct and indirect obstetric causes	(010-O46, O48-O75, O81-O99, Z35)	6	4.6	6	5.5	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
Diseases of the urinary system	(N00-N39)	7	4.4	7	4.3	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
Diseases of the skin and subcutaneous tissue	(L00-L99)	8	4.4	8	4.1	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
Diseases of the musculoskeletal system and connective tissue	(M00-M99)	9	3.3	9	3.3	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
Diseases of the eye and adnexa	(H00-H59)	10	3.2	10	3.0	10	3.0	11	2.9	12	2.9												
Intestinal infectious diseases	(A00-A09)	11	2.6	12	2.6	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
Diseases of the upper respiratory tract	(J00-J06, J30-J39)	12	2.5	11	2.6	12	2.6	12	2.8	11	3.0	11	2.8	11	2.5	11	2.6						

Excludes:

Source : Medical Statistics Unit

[1] 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, Undiagnosed/uncoded

Table 21. Leading Causes of Hospital Deaths, 2006 - 2014

Disease and ICD (10th Revision) Code		2014		2013		2012		2010		2009		2008		2007		2006	
		Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Ischaemic heart disease	(I20 - I25)	1	14.8	1	14.7	1	14.4	1	12.8	1	12.8	1	12.5	1	13.1	1	12.6
Neoplasms[1]	(C00 - D48)	2	11.7	2	11.2	2	11.6	2	11.1	3	9.5	3	9.8	2	10.1	3	9.9
Zoonotic and other bacterial diseases	(A20 - A49)	3	9.1	6	7.9	6	7.1	6	6.6	7	6.3	7	6.2	7	5.6	7	4.9
Pulmonary heart disease and diseases of the pulmonary circulation	(I26 - I51)	4	8.6	4	8.4	3	9.0	3	8.7	2	10.0	2	10.0	3	10.1	2	10.0
Cerebrovascular disease	(I60 - I69)	5	8.4	3	8.6	4	8.7	4	8.7	4	8.4	4	8.7	4	9.2	4	8.9
Diseases of the respiratory system excluding diseases of upper respiratory tract , pneumonia and influenza	(J20 - J22, J40 - J98)	6	8.0	5	7.9	5	7.2	5	7.0	5	6.7	5	8.0	6	6.5	6	6.9
Pneumonia	(J12 - J18)	7	6.6	8	6.1	8	5.7	9	5.2	10	4.9	8	5.9	11	4.0	10	4.4
Diseases of the urinary system	(N00 - N39)	8	6.3	7	6.2	7	6.3	8	5.7	8	5.7	9	5.1	9	5.2	8	4.7
Diseases of the gastro-intestinal tract	(K20 - K92)	9	5.7	9	5.7	9	5.4	7	6.2	6	6.6	6	7.0	5	7.0	5	6.9
Traumatic injuries	(S00 - T19, W54)	10	3.5	11	3.3	11	3.7	11	3.7	11	4.6	11	3.7	10	4.0	12	3.8
Symptoms, signs and abnormal clinical and laboratory findings	(R00 - R99)	11	3.2	10	4.8	10	4.5	10	5.0	9	5.7	10	4.7	8	5.3	9	4.7
Conditions originating in the perinatal period excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition	(P00 - P04, P08 - P96)	12	1.6	12	1.7	12	2.0										
Diabetes mellitus	(E10 - E14)	13	1.6	13	1.6	14	1.7										

[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, 2014[1]

Disease and ICD (10th Revision) Code / District and Rank Order		Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Vavuniya	Mannar	Kilinochchi	Mullaitivu	Batticaloa	Ampara [2]	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle
Traumatic injuries	(S00-T19, W54)	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	2	3	2	2	2	2	3	2	2	2	2	2	1	2	6	2	3	2	2	2	2	2	3	2	4	3
Diseases of the respiratory system excluding diseases of upper the respiratory tract, pneumonia and influenza	(J20-J22, J40-J98)	3	5	3	3	3	3	2	3	3	3	3	3	5	3	2	3	2	3	3	3	3	3	2	3	2	2
Diseases of the gastro-intestinal tract	(K20-K92)	4	7	5	4	4	6	4	4	5	4	7	4	4	6	3	4	4	5	4	5	4	6	4	4	5	5
Viral diseases	(A80-B34)	5	4	4	7	6	7	6	6	6	6	10	13	3	8	7	8	6	9	5	6	7	7	6	4	3	4
Direct and indirect obstetric causes	(O10-O46, O48-O75, O81-O99, Z35)	6	6	8	6	5	5	5	9	4	9	8	7	6	7	5	5	5	7	6	4	5	5	7	6	7	7
Diseases of the urinary system	(N00-N39)	7	8	9	8	7	8	12	7	10	7	6	6	7	5	4	7	7	4	7	8	6	8	5	7	8	8
Diseases of the skin and subcutaneous tissue	(L00-L99)	8	9	6	5	9	9	7	5	9	5	5	5	13	4	8	9	8	6	8	7	8	4	10	9	6	6
Diseases of the musculoskeletal system and connective tissue	(M00-M99)	9	12	11	9	10	10	9	11	7	11	4	8	14	12	9	6	9	8	9	12	14	10	9	8	10	9
Diseases of the eye and adnexa	(H00-H59)	10	10	7	11	8	4	16	10	8	14	9	9	24	17	17	10	15	12	13	9	15	9	14	14	9	11
Intestinal infectious diseases	(A00-A09)	11	15	10	10	12	12	8	13	13	8	13	11	10	10	10	17	11	14	10	10	10	11	13	11	11	12
Diseases of the upper respiratory tract	(J00-J06,J30-J39)	12	17	13	13	14	11	10	14	11	17	11	10	16	9	14	11	10	10	15	13	9	12	8	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, Undiagnosed/uncoded

[2] Includes Kalmunai RDHS Division

Source : Medical Statistics Unit

Table 23. Leading Causes of Hospital Deaths by District, 2014

Disease and ICD (10th Revision) Code / District and Rank Order		Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Vavuniya	Mannar	Kilinochchi	Mullaitivu	Batticaloa	Ampara [2]	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle
Ischaemic heart disease	(I20-I25)	1	2	1	1	2	1	1	1	1	1	7	3	1	3	2	2	1	1	1	2	1	2	1	2	1	1
Neoplasms[1]	(C00-D48)	2	1	8	10	1	8	10	2	10	9	2	7	4	3	9	4	13	6	4	14	4	7	2	9	6	7
Zoonotic and other bacterial diseases	(A20-A49)	3	3	5	3	5	10	7	5	6	8	1	4	16	11	5	9	2	3	5	4	2	5	3	7	5	3
Pulmonary heart disease and diseases of the pulmonary circulation	(I26-I51)	4	4	3	2	4	3	2	8	2	4	4	2	3	7	1	1	4	2	7	1	9	3	7	5	3	4
Cerebrovascular disease	(I60-I69)	5	6	4	4	3	4	4	3	3	6	5	8	13	7	2	8	6	9	3	10	7	4	8	4	2	2
Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza	(J20-J22, J40-J98)	6	5	6	6	6	5	3	6	4	2	6	5	2	7	5	6	3	5	2	6	6	8	6	3	4	6
Pneumonia	(J12-J18)	7	9	7	9	9	2	5	4	5	3	9	10	9	2	5	12	6	7	9	5	5	6	4	6	7	5
Diseases of the urinary system	(N00-N39)	8	8	10	8	7	6	9	10	8	5	8	1	16	6	2	7	5	4	6	7	3	1	5	1	9	9
Diseases of the gastro-intestinal tract	(K20-K92)	9	7	2	7	9	12	13	9	9	13	10	6	9	12	9	10	11	13	8	3	10	9	10	8	8	8
Traumatic injuries	(S00-T19)	10	10	9	11	11	9	16	7	12	13	13	10	5	16	9	5	10	8	10	11	8	10	9	14	10	10
Symptoms, signs and abnormal clinical and laboratory findings	(R00-R99)	11	13	11	5	8	7	8	11	7	7	3	18	16	5	17	3	12	25	18	9	12	13	12	10	11	11
Conditions originating in the perinatal period excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition	(P00 - P04, P08 - P96)	12	16	16	13	12	15	11	13	19	12	12	8	5	1	17	20	9	17	11	12	16	16	14	11	15	16
Diabetes mellitus	(E10 - E14)	13	12	12	16	13	13	14	13	16	9	17	22	5	16	13	15	21	10	15	13	16	19	12	20	14	15

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, 2014

RDHS Division	Poisoning by Drugs, Medicaments and Biological Substances		Toxic Effects of Pesticides				Toxic Effects of Other Substances Mainly Non Medicinal		Total				Case Fatality Rate
			Organophosphate and Carbamate Insecticides		Other Pesticides				Number		Rate per 100,000 Population		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	
Colombo	2,278	6	292	12	256	8	2,174	17	5,000	43	212.1	1.8	0.86
Gampaha	2,151	4	254	22	181	1	1,642	10	4,228	37	180.8	1.6	0.88
Kalutara	1,585	3	86	2	282	4	1,457	12	3,410	21	274.8	1.7	0.62
Kandy	1,977	5	544	14	198	4	2,540	6	5,259	29	375.1	2.1	0.55
Matale	688	-	475	12	190	6	1,015	8	2,368	26	477.4	5.2	1.10
Nuwara Eliya	526	2	638	13	119	1	1,980	1	3,263	17	445.2	2.3	0.52
Galle	1,221	7	152	4	230	6	1,155	8	2,758	25	254.9	2.3	0.91
Matara	706	5	100	8	154	4	1,438	16	2,398	33	288.6	4.0	1.38
Hambantota	1,039	4	483	5	534	1	652	2	2,708	12	437.5	1.9	0.44
Jaffna	613	-	452	10	88	2	3,049	2	4,202	14	708.6	2.4	0.33
Kilinochchi	128	-	57	2	233	3	890	-	1,308	5	1,108.5	4.2	0.38
Mullaitivu	248	-	151	3	12	-	202	-	613	3	652.1	3.2	0.49
Vavuniya	185	-	270	6	47	1	978	3	1,480	10	836.2	5.6	0.68
Mannar	122	2	165	-	70	2	582	1	939	5	911.7	4.9	0.53
Batticaloa	1,303	5	307	3	155	-	1,120	2	2,885	10	539.3	1.9	0.35
Ampara [2]	829	2	341	4	320	6	925	3	2,415	15	362.1	2.2	0.62
Trincomalee	870	1	257	4	251	1	654	-	2,032	6	519.7	1.5	0.30
Kurunegala	2,345	2	1,605	45	391	4	2,158	28	6,499	79	395.1	4.8	1.22
Puttalam	1,000	2	780	63	166	5	1,471	3	3,417	73	438.1	9.4	2.14
Anuradhapura	1,465	5	1,254	39	737	7	2,308	10	5,764	61	652.8	6.9	1.06
Polonnaruwa	1,096	3	532	23	223	1	683	3	2,534	30	610.6	7.2	1.18
Badulla	863	3	866	25	184	2	1,904	11	3,817	41	457.1	4.9	1.07
Monaragala	437	2	515	11	184	-	576	5	1,712	18	367.4	3.9	1.05
Ratnapura	1,381	3	501	6	215	5	916	8	3,013	22	270.2	2.0	0.73
Kegalle	667	1	220	13	39	-	983	13	1,909	27	223.3	3.2	1.41
Total	25,723	67	11,297	349	5,459	74	33,452	172	75,931	662	365.6	3.2	0.87

[1] Deaths per 100 cases

[2] Includes Kalmunai RDHS Division

Source : Medical Statistics Unit

Table 25. Distribution of Patients with Mental Disorders by Regional Director of Health Services Division , 2014

RDHS Division	Dementia	Mental and Behavioral Disorders		Schizophrenia, Schizotypal and Delusional Disorders	Mood Disorders	Neurotic, Stress-Related Somatoform Disorders	Mental Retardation Related Disorders	Behavioral and Emotional Disorders Usually in Childhood and Adolescence	Other and Unspecified Mental Disorders	Total
		Due to Use of Alcohol	Due to Other Psychoactive Substance Use							
Colombo	428	868	771	4,738	3,529	301	243	62	543	11,483
Gampaha	104	1,004	117	1,124	1,627	216	8	10	408	4,618
Kalutara	30	482	55	461	355	79	5	10	212	1,689
Kandy	38	862	41	467	2,323	327	70	37	187	4,352
Matale	10	268	18	258	599	70	14	5	50	1,292
Nuwara Eliya	8	168	8	198	272	55	5	15	176	905
Galle	90	361	6	1,079	746	125	5	5	135	2,552
Matara	22	342	3	162	412	111	1	9	230	1,292
Hambantota	11	59	8	175	44	35	2	5	358	697
Jaffna	45	214	31	994	376	191	23	16	142	2,032
Kilinochchi	1	21	21	158	135	23	1	3	33	396
Mullaitivu	-	1	4	97	71	2	-	-	55	230
Vavuniya	12	38	7	275	250	95	52	2	23	754
Mannar	1	33	3	83	18	19	5	4	64	230
Batticaloa	6	350	17	96	169	142	2	38	173	993
Ampara	9	37	7	222	248	51	-	4	33	611
Kalmunai	16	20	40	336	56	50	23	40	61	642
Trincomalee	3	56	43	97	189	56	25	38	74	581
Kurunegala	54	693	82	833	1,804	42	12	103	198	3,821
Puttalam	8	142	12	72	145	35	1	19	122	556
Anuradhapura	20	125	50	317	457	124	26	9	301	1,429
Polonnaruwa	4	209	7	125	351	42	11	3	166	918
Badulla	455	99	83	911	391	65	5	33	325	2,367
Monaragala	7	37	32	194	161	46	2	5	87	571
Ratnapura	32	393	43	381	250	60	14	14	86	1,273
Kegalle	12	280	26	142	262	86	1	16	28	853
Total	1,426	7,162	1,535	13,995	15,240	2,448	556	505	4,270	47,137

Source : Medical Statistics Unit

Table 26. Case Fatality Rate[1] for Selected Diseases, 2009 - 2014

Disease and ICD Code		2009			2010			2012			2013			2014		
		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)	4,381	7	0.2	3,599	2	0.1	2,349	5	0.2	1,961	3	0.2	1,753	5	0.3
Tetanus	(A34, A35)	39	10	25.6	29	8	27.6	91	5	5.5	170	4	2.4	99	3	3.0
Shigellosis	(A03)	3,396	2	0.1	3,338	3	0.1	2,833	1	0.0	2,000	2	0.1	2,097	1	0.0
Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight	(P05 - P07)	6,962	609	8.7	7,350	877	11.9	7,182	696	9.7	7,534	632	8.4	7,434	571	7.7
Measles	(B05)	162	-	-	147	-	-	80	-	-	4,755	-	-	3,436	1	0.0
Whooping cough	(A37)	-	-	-	-	-	-	95	-	-	50	-	-	68	-	-
Viral hepatitis	(B15 - B19)	9,257	8	0.1	2,989	8	0.3	3,228	9	0.3	3,288	9	0.3	3,164	7	0.2
Malaria	(B50 - B54)	1,060	1	0.1	595	-	-	124	-	-	106	-	-	75	-	-
Tetanus neonatorum	(A33)	-	-	-	1	-	-	-	-	-	13	-	-	-	-	-
Diseases of the liver	(K70 - K76)	17,245	2,074	12.0	17,582	2,015	11.5	15,760	1,681	10.7	16,836	1,790	10.6	17,283	1,882	10.9
Septicaemia	(A40, A41)	5,540	2,090	37.7	5,817	2,364	40.6	6,829	2,569	37.6	7,814	2,945	37.7	9,171	3,634	39.6
Snake bites	(T63.0)	39,813	86	0.2	42,234	88	0.2	41,538	76	0.2	40,468	95	0.2	37,309	94	0.3
Hypertensive diseases	(I10 - I15)	97,857	541	0.6	98,485	705	0.7	98,869	524	0.5	100,224	578	0.6	99,224	649	0.7
Ischaemic heart disease	(J20 - J25)	92,107	4,856	5.3	98,755	5,122	5.2	100,611	5,619	5.6	103,656	5,975	5.8	108,905	6,346	5.8
Pneumonia	(J12 - J18)	22,713	1,850	8.1	23,875	2,099	8.8	23,679	2,233	9.4	24,290	2,489	10.2	23,062	2,802	12.1
Asthma	(J45 - J46)	199,139	676	0.3	195,825	772	0.4	188,654	623	0.3	186,565	610	0.3	190,333	612	0.3
Bactrial meningitis	(G00, G03)	4,771	158	3.3	4,569	122	2.7	3,311	120	3.6	3,683	100	2.7	3,813	95	2.5

[1] Deaths per 100 cases

Source : Medical Statistics Unit

Table 27. Inpatients Treated and Hospital Deaths by Type of Institution and RDHS Division, 2014

RDHS Division	Teaching Hospitals		Provincial General Hospitals		District General Hospitals		Base Hospitals Type A		Base Hospitals Type B		Divisional Hospitals Type A		Divisional Hospitals Type B		Divisional Hospitals Type C		Other Hospitals with Indoor Patients		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	Deaths		
Colombo	564,584	8,450	-	-	-	-	147,686	1,080	20,330	154	7,409	19	38,485	65	8,023	21	125,819	2,126	912,336	11,915	387	1.3
Gampaha	131,278	1,457	-	-	180,839	1,694	69,089	537	30,530	133	38,853	134	8,910	7	25,348	9	26,160	172	511,007	4,143	219	0.8
Kalutara	-	-	-	-	94,103	734	130,451	1,003	8,016	17	15,187	22	46,072	76	11,709	11	-	-	305,538	1,863	246	0.6
Kandy	275,505	3,532	-	-	39,812	280	-	-	50,712	325	-	-	63,890	198	64,798	80	2,503	4	497,220	4,419	355	0.9
Matale	-	-	-	-	67,124	519	54,551	425	-	-	-	-	12,073	30	26,036	35	-	-	159,784	1,009	322	0.6
Nuwara Eliya	-	-	-	-	47,066	421	19,652	123	17,478	86	4,216	21	29,955	73	21,677	48	-	-	140,044	772	191	0.6
Galle	162,246	2,445	-	-	-	-	79,132	458	7,796	43	10,010	11	33,698	66	27,098	21	-	-	319,980	3,044	296	1.0
Matara	-	-	-	-	108,129	1,147	-	-	32,570	157	14,459	41	36,534	70	7,969	6	-	-	199,661	1,421	240	0.7
Hambantota	-	-	-	-	56,581	224	42,317	276	32,613	40	-	-	48,907	81	19,765	5	-	-	200,183	626	323	0.3
Jaffna	125,132	1,385	-	-	-	-	40,830	117	14,556	17	-	-	18,565	17	7,196	3	-	-	206,279	1,539	348	0.7
Kilinochchi	-	-	-	-	36,623	96	-	-	3,023	-	-	-	1,349	-	1,760	-	-	-	42,755	96	362	0.2
Mullaitivu	-	-	-	-	16,383	51	-	-	7,077	-	8,909	1	1,798	-	914	-	-	-	35,081	52	373	0.1
Vavuniya	-	-	-	-	54,017	320	-	-	4,387	21	-	-	-	-	1,990	-	-	-	60,394	341	341	0.6
Mannar	-	-	-	-	15,927	82	-	-	-	-	-	-	6,654	8	2,655	-	-	-	25,236	90	245	0.4
Batticaloa	82,709	211	-	-	-	-	-	-	52,099	73	-	-	17,902	23	19,453	19	-	-	172,163	326	322	0.2
Ampara[1]	-	-	-	-	48,872	380	77,285	339	47,875	133	-	-	16,878	5	22,427	12	-	-	213,337	869	320	0.4
Trincomalee	-	-	-	-	42,851	321	18,144	66	30,571	66	-	-	-	-	17,654	10	-	-	109,220	463	279	0.4
Kurunegala	-	-	169,647	2,846	-	-	52,448	414	74,358	293	68,875	157	55,100	124	34,598	45	-	-	455,026	3,879	277	0.9
Puttalam	-	-	-	-	47,819	630	46,456	351	38,201	266	14,560	18	8,290	9	15,450	11	-	-	170,776	1,285	219	0.8
Anuradhapura	133,326	2,072	-	-	-	-	-	-	43,565	105	35,098	63	47,569	70	43,116	37	910	-	303,584	2,347	344	0.8
Polonnaruwa	-	-	-	-	97,844	816	-	-	26,024	99	9,362	27	20,496	27	8,820	12	-	-	162,546	981	392	0.6
Badulla	-	-	96,208	1,075	-	-	68,113	652	15,337	130	18,351	65	24,986	44	39,572	39	-	-	262,567	2,005	314	0.8
Monaragala	-	-	-	-	49,190	409	-	-	37,736	140	-	-	29,874	45	25,742	33	-	-	142,542	627	306	0.4
Ratnapura	-	-	111,763	1,174	53,916	477	-	-	74,151	351	43,749	85	23,534	27	16,791	17	-	-	323,904	2,131	290	0.7
Kegalle	-	-	-	-	70,025	619	-	-	68,904	480	36,485	66	3,427	4	10,445	5	21	-	189,307	1,174	221	0.6
Total	1,474,780	19,552	377,618	5,095	1,127,121	9,220	846,154	5,841	737,909	3,129	325,523	730	594,946	1,069	481,006	479	155,413	2,302	6,120,470	47,417	295	0.8

[1] Includes Kalmunai RDHS Division

Source : Medical Statistics Unit

Table 28. Hospitalizations, Hospital Deaths and Case Fatality Rates of selected Non-Communicable Diseases, 2013-2014

Disease	ICD Code	2013					2014				
		Live Discharges		Deaths		Case Fatality Rate *	Live Discharges		Deaths		Case Fatality Rate *
		Male	Female	Male	Female		Male	Female	Male	Female	
Diabetes mellitus	(E10-E14)	38,407	45,209	331	312	0.76	37,296	43,408	339	332	0.82
Essential hypertension	(I10)	36,330	53,608	187	219	0.45	36,811	52,966	217	289	0.56
Other hypertensive diseases	(I12-I15)	4,791	4,917	100	72	1.74	1,933	1,659	14	26	1.10
Ischaemic heart diseases	(I20-I25)	53,941	43,740	3,528	2,447	5.76	56,792	45,767	3,738	2,608	5.83
Cerebrovascular diseases	(I60-I69)	21,421	15,277	2,013	1,457	8.64	23,221	15,434	2,118	1,460	8.47
Chronic obstructive pulmonary diseases	(J40-J44)	26,441	8,218	891	179	2.99	29,532	8,895	932	170	2.79
Asthma	(J45-J46)	92,905	93,050	320	290	0.33	94,062	95,659	334	278	0.32
Alcoholic liver diseases	(K70)	5,647	671	508	45	8.05	4,464	530	452	23	8.69
Other diseases of liver	(K71-K76)	6,230	2,498	899	338	12.41	7,418	2,989	983	424	11.91
Neoplasms	(C00-D48)	42,128	51,194	2,559	1,980	4.64	46,651	60,511	2,867	2,128	4.45
Renal failure	(N17-N19)	15,627	7,560	1,426	736	8.53	15,036	7,602	1,434	713	8.66

* Deaths per 100 cases

Source : Medical Statistics Unit

Table 29. Hospitalizations, Hospital Deaths and Case Fatality Rates of Selected Non Communicable Diseases by RDHS Division, 2014

RDHS Area	Neoplasms (C00-D48)			Diabetes Mellitus (E10-E14)			Essential hypertension (I10)			Ischaemic heart disease (I20-I25)			Cerebrovascular disease (I60-I69)		
	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *
Colombo	50,761	2,198	4.15	9,881	149	1.49	7,422	85	1.13	14,719	1,225	7.68	4,840	589	10.85
Gampaha	4,083	212	4.94	6,338	74	1.15	7,182	32	0.44	8,360	688	7.60	4,392	343	7.24
Kalutara	1,516	49	3.13	3,329	17	0.51	4,215	13	0.31	6,665	354	5.04	3,163	182	5.44
Kandy	11,456	622	5.15	7,109	100	1.39	8,785	60	0.68	8,251	512	5.84	4,277	428	9.10
Matale	982	49	4.75	2,419	25	1.02	2,860	14	0.49	2,265	185	7.55	837	89	9.61
Nuwara Eliya	678	23	3.28	2,002	10	0.50	3,461	41	1.17	2,485	113	4.35	1,216	93	7.10
Galle	11,385	453	3.83	2,329	48	2.02	3,497	41	1.16	5,890	474	7.45	2,188	283	11.45
Matara	903	51	5.35	2,128	14	0.65	2,404	41	1.68	4,234	206	4.64	1,620	153	8.63
Hambantota	369	29	7.29	2,723	29	1.05	3,202	21	0.65	3,307	73	2.16	950	37	3.75
Jaffna	3,518	157	4.27	2,622	12	0.46	1,920	21	1.08	1,996	121	5.72	1,573	142	8.28
Kilinochchi	143	9	5.92	565	1	0.18	597	-	-	432	9	2.04	136	5	3.55
Mullaitivu	69	2	2.82	488	1	0.20	456	-	-	300	6	1.96	100	6	5.66
Vavuniya	477	18	3.64	556	-	-	512	-	-	973	36	3.57	307	16	4.95
Mannar	161	5	3.01	749	4	0.53	739	-	-	963	30	3.02	113	2	1.74
Batticaloa	2,425	32	1.30	1,681	4	0.24	1,949	-	-	2,354	40	1.67	548	12	2.14
Ampara	134	15	10.07	1,027	-	-	1,269	13	1.01	1,393	74	5.04	296	41	12.17
Kalmunai	203	3	1.46	3,409	5	0.15	1,947	2	0.10	2,866	96	3.24	462	16	3.35
Trincomalee	367	29	7.32	1,596	16	0.99	1,416	2	0.14	1,655	64	3.72	436	20	4.39
Kurunegala	2,606	323	11.03	5,985	39	0.65	8,483	33	0.39	9,624	691	6.70	3,053	330	9.75
Puttalam	599	27	4.31	1,742	30	1.69	1,811	5	0.28	2,740	159	5.48	975	47	4.60
Anuradhapura	2,205	230	9.45	6,600	18	0.27	6,514	10	0.15	5,722	376	6.17	1,274	136	9.65
Polonnaruwa	553	56	9.20	1,667	5	0.30	1,770	2	0.11	1,990	142	6.66	785	98	11.10
Badulla	6,051	207	3.31	3,991	41	1.02	6,308	44	0.69	3,219	223	6.48	1,502	110	6.82
Monaragala	458	25	5.18	3,090	3	0.10	3,407	4	0.12	1,984	82	3.97	399	53	11.73
Ratnapura	4,076	112	2.67	3,849	16	0.41	3,726	6	0.16	5,226	184	3.40	1,985	182	8.40
Kegalle	984	59	5.66	2,829	10	0.35	3,925	16	0.41	2,946	183	5.85	1,228	165	11.84
Sri Lanka	107,162	4,995	4.45	80,704	671	0.82	89,777	506	0.56	102,559	6,346	5.83	38,655	3,578	8.47

* Deaths per 100 cases

Continued…

Source : Medical Statistics Unit

Table 29. Hospitalizations, Hospital Deaths and Case Fatality Rates of Selected Non Communicable Diseases by RDHS Division, 2014

RDHS Area	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40-J44)			Asthma (J45-J46)			Alcoholic liver disease (K70)			Other diseases of liver (K71-K76)			Renal failure (N17-N19)		
	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *
Colombo	3,287	134	3.92	12,389	112	0.90	863	116	11.85	1,588	289	15.40	1,520	310	16.94
Gampaha	2,320	100	4.13	20,575	29	0.14	631	108	14.61	1,742	264	13.16	523	101	16.19
Kalutara	2,194	34	1.53	9,325	18	0.19	296	16	5.13	488	73	13.01	588	86	12.76
Kandy	6,006	162	2.63	11,425	67	0.58	177	14	7.33	1,175	115	8.91	2,546	195	7.11
Matale	2,065	43	2.04	3,963	19	0.48	72	5	6.49	155	18	10.40	330	34	9.34
Nuwara Eliya	2,730	68	2.43	3,829	15	0.39	67	3	4.29	124	5	3.88	192	21	9.86
Galle	2,392	64	2.61	10,612	39	0.37	133	15	10.14	660	91	12.12	271	77	22.13
Matara	873	32	3.54	6,141	34	0.55	84	3	3.45	184	32	14.81	207	48	18.82
Hambantota	853	7	0.81	11,347	30	0.26	87	5	5.43	98	11	10.09	307	33	9.71
Jaffna	619	37	5.64	9,127	19	0.21	32	-	-	1,626	68	4.01	260	58	18.24
Kilinochchi	104	2	1.89	816	3	0.37	28	-	-	73	2	2.67	473	6	1.25
Mullaitivu	111	1	0.89	1,759	2	0.11	31	-	-	56	2	3.45	572	5	0.87
Vavuniya	278	5	1.77	993	-	-	8	3	27.27	155	15	8.82	668	59	8.12
Mannar	91	5	5.21	769	1	0.13	36	-	-	67	2	2.90	138	1	0.72
Batticaloa	413	3	0.72	6,148	3	0.05	21	1	4.55	51	8	13.56	635	14	2.16
Ampara	781	13	1.64	1,745	4	0.23	80	-	-	39	13	25.00	633	56	8.13
Kalmunai	1,188	10	0.83	7,174	11	0.15	21	-	-	23	3	11.54	99	2	1.98
Trincomalee	519	18	3.35	3,221	7	0.22	72	2	2.70	220	7	3.08	2,199	32	1.43
Kurunegala	2,099	70	3.23	16,979	60	0.35	944	52	5.22	457	137	23.06	1,944	218	10.08
Puttalam	617	22	3.44	5,624	10	0.18	415	47	10.17	186	46	19.83	339	36	9.60
Anuradhapura	1,688	57	3.27	9,091	32	0.35	89	11	11.00	134	45	25.14	5,168	272	5.00
Polonnaruwa	720	25	3.36	4,603	11	0.24	40	6	13.04	175	30	14.63	757	156	17.09
Badulla	2,033	71	3.37	8,796	38	0.43	220	28	11.29	223	30	11.86	1,076	156	12.66
Monaragala	1,026	37	3.48	7,221	6	0.08	42	3	6.67	138	17	10.97	545	75	12.10
Ratnapura	1,755	38	2.12	9,749	21	0.21	321	25	7.23	289	55	15.99	386	65	14.41
Kegalle	1,665	44	2.57	6,300	21	0.33	184	12	6.12	281	29	9.35	262	31	10.58
Sri Lanka	38,427	1,102	2.79	189,721	612	0.32	4,994	475	8.69	10,407	1,407	11.91	22,638	2,147	8.66

* Deaths per 100 cases

Source : Medical Statistics Unit

Table 30. Outpatient Attendance by District and Type of Institution, 2014

District	Teaching Hospitals	Provincial General Hospitals	District General Hospitals	Base Hospitals Type A	Base Hospitals Type B	Divisional Hospitals Type A	Divisional Hospitals Type B	Divisional Hospitals Type C	Primary Medical Care Units with Maternity Homes	Other Institutions with Indoor Facility	Other Institutions without Indoor Facility	Primary Medical Care Units	Total Attendance	Attendence per 1,000 Population
Colombo	2,567,167			586,446	224,059	153,434	602,028	305,165		887,991		518,823	5,845,113	2,479.9
Gampaha	565,211		616,322	252,297	274,455	584,375	78,718	478,454		211,136	25,522	762,090	3,848,580	1,646.1
Kalutara			373,857	586,055	63,768	163,448	610,759	340,064			26,781	211,256	2,375,988	1,914.6
Kandy	1,015,139		303,698		325,593		985,685	1,145,935		208,583	142,995	386,871	4,514,499	3,220.0
Matale			349,817	167,012			228,849	441,196				273,666	1,460,540	2,944.6
Nuwara Eliya			206,228	98,915	158,788	91,270	365,932	343,625				309,591	1,574,349	2,147.8
Galle	531,335			370,140	88,719	153,338	464,224	492,731		63,019	26,553	566,587	2,756,646	2,547.7
Matara			314,985		198,752	151,474	427,149	240,255				562,804	1,895,419	2,280.9
Hambantota			245,528	137,127	293,660		676,011	350,038				237,094	1,939,458	3,133.2
Jaffna	316,429			274,966	190,208		305,937	516,539				276,162	1,880,241	3,170.7
Kilinochchi			211,790		48,007		27,496	148,912				6,023	442,228	3,747.7
Mullaitivu			111,279		89,192	114,197	32,126	33,320				17,014	397,128	4,224.8
Vavuniya			258,225		58,284		25,244	165,813			14,858	39,637	562,061	3,175.5
Mannar			159,205				119,326	147,042				20,347	445,920	4,329.3
Batticaloa	242,346				541,368		235,127	328,900			9,183	354,204	1,711,128	3,198.4
Ampara			227,604	525,803	444,883		290,825	528,943	72,692		79	341,423	2,432,252	3,646.6
Trincomalee			123,546	129,950	315,903			263,466				356,452	1,189,317	3,041.7
Kurunegala		576,437		192,796	447,875	745,593	818,881	776,015				687,352	4,244,949	2,580.5
Puttalam			234,963	182,803	159,142	207,576	198,885	380,488			2,437	428,640	1,794,934	2,301.2
Anuradhapura	259,065				349,560	479,442	637,762	789,902		18,137		398,748	2,932,616	3,321.2
Polonnaruwa			341,716		258,053	98,652	279,298	208,793				156,674	1,343,186	3,236.6
Badulla		305,818		389,545	170,637	260,639	375,935	876,702			34,009	440,569	2,853,854	3,417.8
Monaragala			186,448		372,180		480,028	440,078				137,055	1,615,789	3,467.4
Ratnapura		325,342	191,438		515,363	570,006	370,239	557,935				278,185	2,808,508	2,518.8
Kegalle			420,146		505,306	447,040	64,090	301,837		24,551	24,757	452,784	2,240,511	2,620.5
Total	5,496,692	1,207,597	4,876,795	3,893,855	6,093,755	4,220,484	8,700,554	10,602,148	72,692	1,413,417	307,174	8,220,051	55,105,214	2,653.0

Source : Medical Statistics Unit

Table 31. Outpatient Attendance by RDHS Division, 2014

RDHS	Quarter				Total Visits
	First	Second	Third	Fourth	
Colombo	1,489,502	1,537,854	1,406,501	1,411,256	5,845,113
Gampaha	967,771	1,004,071	932,403	944,335	3,848,580
Kalutara	616,758	616,945	568,154	574,131	2,375,988
Kandy	1,127,757	1,167,610	1,113,707	1,105,425	4,514,499
Matale	366,966	370,173	354,861	368,540	1,460,540
Nuwara Eliya	392,586	398,423	391,583	391,757	1,574,349
Galle	706,468	719,113	664,571	666,494	2,756,646
Matara	473,049	491,036	459,792	471,542	1,895,419
Hambantota	502,709	495,909	454,184	486,656	1,939,458
Jaffna	462,901	468,963	458,964	489,413	1,880,241
Kilinochchi	112,246	107,458	102,065	120,459	442,228
Mannar	108,597	105,465	102,028	129,830	445,920
Vavuniya	138,204	134,469	134,323	155,065	562,061
Mullaitivu	100,014	98,461	91,068	107,585	397,128
Batticaloa	460,739	427,577	403,089	419,723	1,711,128
Ampara	248,786	240,355	231,726	217,675	938,542
Kalmunai	382,590	381,428	355,201	374,491	1,493,710
Trincomalee	305,057	290,006	275,680	318,574	1,189,317
Kurunegala	1,022,052	1,126,421	1,018,111	1,078,365	4,244,949
Puttalam	428,549	467,837	435,387	463,161	1,794,934
Anuradhapura	719,792	749,403	701,476	761,945	2,932,616
Polonnaruwa	344,148	327,619	330,497	340,922	1,343,186
Badulla	703,352	715,114	702,125	733,263	2,853,854
Monaragala	410,019	418,042	383,424	404,304	1,615,789
Ratnapura	702,752	707,444	680,354	717,958	2,808,508
Kegalle	553,467	593,254	543,613	550,177	2,240,511
Grand Total	13,846,831	14,160,450	13,294,887	13,803,046	55,105,214

Source : Medical Statistics Unit

Table 32. Outpatient Department (OPD) Visits by Type of Hospital, 2014

Hospital Type	Quarter				Total Visit
	First	Second	Third	Fourth	
Teaching Hospitals	1,396,434	1,448,185	1,325,105	1,326,968	5,496,692
Provincial General Hospitals	300,162	291,932	303,009	312,494	1,207,597
District General Hospitals	1,233,341	1,234,569	1,190,261	1,218,624	4,876,795
Base Hospitals - Type A	1,000,416	999,830	932,498	961,111	3,893,855
Base Hospitals - Type B	1,535,255	1,555,166	1,463,498	1,539,836	6,093,755
Divisional Hospitals - Type A	1,054,215	1,115,120	999,377	1,051,772	4,220,484
Divisional Hospitals - Type B	2,165,138	2,249,414	2,103,962	2,182,040	8,700,554
Divisional Hospitals - Type C	2,640,313	2,730,982	2,529,342	2,701,511	10,602,148
Primary Medical Care Units with Maternity Homes	16,735	18,676	17,993	19,288	72,692
Other Institutions with Indoor Facility[1]	348,798	355,552	348,737	360,330	1,413,417
Other Institutions without Indoor Facility	75,691	67,855	84,375	79,253	307,174
Primary Medical Care Units	2,080,333	2,093,169	1,996,730	2,049,819	8,220,051
Total Visits	13,846,831	14,160,450	13,294,887	13,803,046	55,105,214

[1] Includes; Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source : Medical Statistics Unit

Table 33. Clinic Visits by Quarter, by RDHS Division, 2014

RDHS Division	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	First visits	Total visits	First visits	Total visits	First visits	Total visits	First visits	Total visits	First visits	Total visits
Colombo	223,018	1,017,398	213,495	1,014,019	236,745	1,073,298	232,286	1,088,011	905,544	4,192,726
Gampaha	149,351	557,068	145,771	520,721	148,991	576,996	143,004	534,077	587,117	2,188,862
Kalutara	76,210	257,798	70,096	243,562	82,733	269,260	84,369	276,385	313,408	1,047,005
Kandy	139,285	613,785	136,183	605,795	164,945	699,521	143,902	654,507	584,315	2,573,608
Matale	33,672	161,256	29,673	151,098	31,898	166,602	29,395	161,635	124,638	640,591
Nuwara Eliya	32,924	145,729	29,629	142,726	32,516	154,235	36,734	161,956	131,803	604,646
Galle	104,668	275,827	98,000	260,411	110,909	285,896	109,999	283,267	423,576	1,105,401
Matara	69,013	196,112	60,157	184,683	67,770	201,593	66,190	202,385	263,130	784,773
Hambantota	39,168	139,783	30,103	131,695	35,453	148,923	42,852	146,222	147,576	566,623
Jaffna	57,552	261,797	51,126	247,578	55,359	270,736	50,313	270,318	214,350	1,050,429
Kilinochchi	10,052	32,714	9,579	34,815	6,516	33,335	8,668	35,678	34,815	136,542
Mullaitivu	12,242	26,183	10,705	27,354	12,692	29,348	9,324	27,364	44,963	110,249
Vavuniya	17,703	62,676	17,996	65,667	18,621	66,716	16,675	68,587	70,995	263,646
Mannar	7,728	35,578	9,524	37,628	11,111	40,305	10,527	39,163	38,890	152,674
Batticaloa	38,474	137,536	29,721	126,699	33,006	136,605	34,145	126,079	135,346	526,919
Ampara	39,410	96,532	29,496	96,972	30,514	99,805	26,938	92,801	126,358	386,110
Kalmunai	35,369	115,051	32,293	110,111	33,391	113,996	31,126	112,713	132,179	451,871
Trincomalee	17,520	77,243	19,387	79,281	24,349	85,488	22,646	87,723	83,902	329,735
Kurunegala	114,038	440,027	94,512	395,553	107,554	486,197	79,917	374,830	396,021	1,696,607
Puttalam	49,220	166,620	43,264	159,381	53,714	178,792	48,184	172,396	194,382	677,189
Anuradhapura	42,239	233,334	39,176	236,535	44,197	255,729	40,480	247,585	166,092	973,183
Polonnaruwa	42,262	131,908	44,648	132,766	39,263	144,114	36,722	136,205	162,895	544,993
Badulla	74,371	298,756	66,605	293,664	72,547	320,501	70,994	313,976	284,517	1,226,897
Monaragala	32,605	115,661	35,191	109,735	36,762	114,780	32,942	112,697	137,500	452,873
Ratnapura	86,308	281,982	68,971	267,157	93,239	307,713	80,645	299,817	329,163	1,156,669
Kegalle	53,134	213,313	55,541	221,924	54,385	246,190	58,916	237,645	221,976	919,072
Total	1,597,536	6,091,667	1,470,842	5,897,530	1,639,180	6,506,674	1,547,893	6,264,022	6,255,451	24,759,893

Source : Medical Statistics Unit

Table 34. Clinic Visits by Quarter, by Type of Hospital, 2014

Type of Hospital	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	First visits	Total visits	First visits	Total visits	First visits	Total visits	First visits	Total visits	First visits	Total visits
Teaching Hospitals	355,977	1,638,967	328,923	1,607,186	356,765	1,706,547	348,319	1,710,336	1,389,984	6,663,036
Provincial General Hospitals	84,951	356,825	57,870	289,768	78,262	366,143	57,350	275,778	278,433	1,288,514
District General Hospitals	296,350	955,840	257,841	910,003	281,696	987,368	270,482	969,612	1,106,369	3,822,823
Base Hospitals Type A	192,157	579,600	184,053	566,726	211,800	622,131	202,149	610,275	790,159	2,378,732
Base Hospitals Type B	158,468	580,312	167,660	598,351	170,098	671,963	162,930	607,526	659,156	2,458,152
Divisional Hospitals Type A	81,553	320,678	75,399	310,146	88,096	336,999	68,669	313,158	313,717	1,280,981
Divisional Hospitals Type B	121,306	542,223	116,101	530,608	125,503	564,630	123,931	558,104	486,841	2,195,565
Divisional Hospitals Type C	149,055	540,323	140,599	529,538	139,490	583,401	133,914	555,137	563,058	2,208,399
Primary Medical Care Units and Maternity Homes	1,209	3,937	599	2,516	1,365	4,555	283	3,422	3,456	14,430
Other Hospitals and Clinics [1]	60,600	223,811	57,797	211,484	82,013	268,683	55,947	212,226	256,357	916,204
Primary Medical Care Units	95,910	349,151	84,000	341,204	104,092	394,254	123,919	448,448	407,921	1,533,057
Grand Total	1,597,536	6,091,667	1,470,842	5,897,530	1,639,180	6,506,674	1,547,893	6,264,022	6,255,451	24,759,893

[1] Includes: Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source : Medical Statistics Unit

Table 35. Rank Order of Clinic Visits in RDHS Divisions, 2014

Type of Clinic \ RDHS Division and Rank Order	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar	Batticaloa	Ampara	Kalmunai	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle
Medical	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dental	2	2	2	2	2	2	2	2	2	2	2	3	3	2	3	2	2	2	3	2	2	2	2	2	2	2	2
Gynaecology and Obstetrics	3	5	4	4	3	3	3	3	5	3	4	4	6	5	5	5	3	4	2	3	3	3	3	4	4	3	3
Eye	4	3	3	3	6	5	5	4	3	4	6	6	5	4	8	6	5	5	5	5	4	11	10	5	8	5	7
Diabetic	5	6	10	15	4	6	6	10	14	16	3	2	4	3	2	3	6	3	8	7	6	15	4	3	3	10	5
Surgical	6	7	7	6	5	4	7	5	6	5	9	5	9	11	7	4	4	6	4	10	10	7	5	6	7	6	8
Psychiatric	7	8	5	5	8	7	8	6	4	6	5	8	7	9	6	7	8	7	11	8	5	9	7	7	5	4	6
Skin	8	9	8	7	11	8	9	9	7	8	10	7	10	6	11	9	10	10	6	9	8	6	8	8	9	8	4
Paediatric	9	14	9	10	9	9	4	7	11	7	8	9	8	7	9	12	7	8	9	11	9	4	11	10	6	9	9
Cardiology	10	4	12	13	7	18	16	11	8	14	7	11	13	16	14	11	16	14	14	6	15	8	9	11	17	13	13
Baby	11	16	6	9	10	10	13	13	12	9	12	14	12	13	4	16	9	12	7	4	7	5	12	9	12	7	10
E.N.T	12	10	11	8	13	11	11	16	10	10	13	10	14	8	10	13	13	11	10	12	11	13	13	13	10	11	11
Orthopaedic	13	13	14	12	14	12	14	14	15	12	11	15	14	12	14	8	12	14	12	15	12	10	6	14	13	14	12
Cancer	14	12	16	17	12	14	16	8	17	18	14	13	14	15	14	14	18	14	13	13	17	12	18	12	14	15	16
Other	15	11	15	16	18	13	10	12	9	17	15	16	2	14	12	15	17	9	15	16	14	18	14	15	11	17	16
Nerve	16	15	18	11	15	16	16	15	13	18	20	17	14	17	14	20	19	14	16	19	17	20	15	20	17	12	16
Genito Urinary	17	19	17	18	17	18	17	17	18	18	16	17	11	17	14	18	19	14	16	14	17	16	17	16	17	18	16
V.D	18	20	13	14	21	16	15	20	16	13	18	17	14	10	14	17	15	13	16	17	13	14	16	19	17	16	16
Thoracic	19	17	19	18	19	17	12	18	18	11	19	12	14	17	13	10	11	14	16	18	16	20	18	18	15	19	14
Neuro Surgical	20	18	20	18	16	18	17	19	18	15	17	17	14	17	14	19	14	14	16	19	17	17	18	17	16	19	15
Rectum	21	21	20	18	20	18	17	20	18	18	20	17	14	17	14	20	19	14	16	19	17	19	18	21	17	19	16

Source : Medical Statistics Unit

Table 36. Clinic Visits by Type of Clinic and RDHS Division, 2014

Type of Clinic	SriLanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Kilinochchi	Mullaitivu
Medical	10,686,934	1,342,711	1,019,865	461,200	1,046,927	337,898	361,021	408,021	343,726	297,975	370,861	44,100	42,995
Dental	3,039,990	329,098	252,297	172,659	334,509	90,816	51,685	168,124	130,325	70,510	111,314	16,121	11,429
Gynaecology and Obstetrics	1,641,705	280,276	134,116	64,349	148,420	39,462	43,526	90,817	34,431	38,314	78,538	14,541	6,087
Eye	1,377,445	328,524	185,713	77,195	115,758	25,432	24,952	86,554	46,205	29,811	46,923	6,879	6,684
Diabetic	1,137,268	244,016	55,505	5,666	144,519	24,023	19,620	29,043	10,990	232	98,664	22,196	9,796
Surgical	1,060,668	240,148	79,322	47,175	118,292	25,442	18,620	61,070	28,171	26,771	44,410	8,582	2,535
Psychiatric	1,027,586	200,710	109,783	59,785	95,217	23,353	14,712	41,182	38,023	25,200	56,238	5,707	4,829
Skin	779,101	149,256	66,659	28,539	65,031	19,527	12,749	33,008	27,323	18,510	43,732	6,249	1,790
Paediatric	678,725	71,800	61,137	26,032	78,641	19,120	33,132	37,141	16,192	24,384	45,101	5,038	3,367
Cardiology	674,723	283,353	24,215	12,180	105,158	-	-	22,606	24,308	1,022	46,720	1,321	174
Baby	641,305	61,998	98,998	27,286	68,704	14,188	3,055	14,030	16,099	11,798	30,335	449	367
E.N.T	495,455	135,836	50,840	27,858	48,132	6,899	5,164	10,096	16,750	9,397	19,807	3,082	-
Orthopaedic	400,892	118,590	12,276	12,276	44,604	6,872	2,913	13,003	9,314	3,946	40,422	285	-
Cancer	318,045	129,491	7,602	241	52,803	2,073	386	35,412	1,794	-	8,566	695	-
Other	294,286	129,510	12,199	538	16,605	3,834	7,934	21,176	18,873	37	3,035	122	19,325
Nerve	165,977	69,226	632	15,500	37,965	596	-	10,595	13,285	-	-	-	-
Genito Urinary	93,178	23,583	4,648	-	20,146	-	-	9,431	-	-	2,390	-	871
V.D	90,744	454	12,820	8,526	498	640	1,905	-	8,964	1,078	1,389	-	-
Thoracic	82,639	27,972	235	-	6,839	416	3,272	9,089	-	7,316	8	1,175	-
Neuro Surgical	68,690	26,174	-	-	21,534	-	-	5,003	-	322	1,976	-	-
Rectum	4,537	-	-	-	3,306	-	-	-	-	-	-	-	-

Continued...

Source : Medical Statistics Unit

Table 36. Clinic Visits by Type of Clinic and RDHS Division, 2014

Type of Clinic	Vavuniya	Mannar	Batticaloa	Ampara	Kalmunai	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle
Medical	69,265	64,733	248,204	188,432	187,449	165,851	831,069	275,662	503,228	265,512	539,393	218,911	545,150	506,775
Dental	26,238	16,634	56,330	55,353	68,647	24,332	218,135	101,004	91,266	73,527	193,124	61,587	192,718	122,208
Gynaecology and Obstetrics	20,896	10,473	19,783	32,252	32,588	32,634	136,021	57,499	71,541	32,009	74,906	27,642	68,480	52,104
Eye	25,665	6,127	19,244	16,829	21,231	18,947	61,065	44,034	22,426	14,559	55,665	13,107	46,032	31,884
Diabetic	25,756	18,432	29,161	13,061	64,171	11,767	57,789	33,083	8,238	28,028	74,909	49,801	20,183	38,619
Surgical	10,405	6,484	28,301	21,300	18,434	20,358	45,639	24,537	28,837	26,617	51,603	13,844	41,987	21,784
Psychiatric	12,121	8,144	17,003	10,343	17,971	5,096	53,868	33,372	24,434	16,360	45,322	16,108	54,707	37,998
Skin	17,825	1,241	15,827	8,002	9,800	16,731	47,124	28,034	28,969	15,305	31,992	10,625	29,509	45,744
Paediatric	13,210	2,197	11,587	11,577	12,123	9,653	37,604	25,031	35,303	11,189	24,379	14,686	28,871	20,230
Cardiology	366	-	13,399	396	-	106	58,763	116	25,293	14,615	22,943	-	15,513	2,156
Baby	8,079	16,171	5,123	10,088	3,580	12,448	82,611	29,387	29,738	10,171	31,708	5,552	31,947	17,395
E.N.T	12,445	1,441	8,654	4,326	5,892	6,618	21,870	11,920	19,884	7,883	18,525	9,947	20,099	12,090
Orthopaedic	8,997	-	16,382	5,237	-	4,969	10,202	8,803	24,095	21,261	16,321	683	11,394	8,047
Cancer	832	-	8,156	187	-	195	15,396	-	21,332	-	21,958	624	10,302	-
Other	888	449	7,857	359	9,833	30	4,497	2,226	4,790	5,733	6,737	9,030	8,669	-
Nerve	-	-	-	-	-	-	-	-	-	1,058	215	-	16,905	-
Genito Urinary	-	-	2,783	-	-	-	10,920	-	7,994	303	5,883	-	4,226	-
V.D	10,658	-	4,221	1,095	152	-	3,682	2,437	18,528	863	2,857	-	9,977	-
Thoracic	-	148	14,177	6,089	-	-	352	44	-	-	3,339	424	-	1,744
Neuro Surgical	-	-	727	1,184	-	-	-	-	6,056	-	5,118	302	-	294
Rectum	-	-	-	-	-	-	-	-	1,231	-	-	-	-	-

Source : Medical Statistics Unit

Table 37. Utilization of Medical Institutions by Regional Director of Health Services Division, 2014

RDHS Division	Teaching Hospitals			Provincial General Hospitals			District General Hospitals			Base Hospitals Type A			Base Hospitals Type B		
	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate
Colombo	3.41	73.00	71.73							1.73	159.35	78.78	2.89	71.13	58.62
Gampaha	3.08	91.14	80.36				2.06	125.99	76.62	2.17	119.94	75.69	1.20	131.67	43.58
Kalutara							2.64	115.30	87.03	1.71	135.25	67.62	1.63	47.43	22.48
Kandy	3.72	80.53	87.41				2.62	89.66	68.44				2.35	112.09	73.73
Matale							2.48	85.92	59.59	1.71	194.56	92.82			
Nuwara Eliya							2.45	110.55	79.15	1.86	188.96	98.96	1.52	128.51	54.49
Galle	3.35	73.75	79.66							2.15	109.14	65.62	2.39	61.22	42.57
Matara							2.52	93.53	68.27				2.41	81.09	54.49
Hambantota							2.52	90.17	62.84	2.13	161.52	100.13	1.68	104.91	49.72
Jaffna	2.71	99.68	74.63							2.43	77.63	52.07	1.97	58.46	31.64
Kilinochchi							2.25	133.43	83.20				2.00	85.70	47.99
Mullaitivu							3.08	75.43	65.01				2.17	68.82	41.42
Vavuniya							2.33	92.69	61.27				2.51	29.88	21.02
Mannar							1.45	48.09	19.81						
Batticaloa	2.09	89.23	56.28										3.07	97.84	83.45
Ampara							2.43	85.85	57.96				2.06	107.61	62.04
Kalmunai										2.29	77.92	49.28	1.98	76.68	44.14
Trincomalee							2.15	80.17	47.83	1.65	81.97	38.31	1.55	133.36	58.90
Kurunegala				3.03	97.32	83.99				2.40	88.90	60.37	2.54	101.67	71.73
Puttalam							2.20	85.30	57.24	1.97	137.55	77.70	1.82	118.68	61.64
Anuradhapura	3.32	68.20	63.30										1.92	118.40	64.89
Polonnaruwa							1.95	128.57	69.12				1.90	120.26	62.93
Badulla				4.13	65.66	75.21				2.94	106.80	89.63	1.66	137.91	64.55
Monaragala							2.48	120.72	89.71				1.95	103.55	56.41
Ratnapura				2.56	101.50	72.53	2.84	126.68	110.08				2.04	132.76	78.12
Kegalle							2.34	92.60	65.51				2.55	98.12	79.38
Average	3.29	77.96	74.70	3.17	87.65	78.07	2.35	101.44	68.87	2.05	118.18	69.16	2.14	101.50	61.89

Continued…

Source: Medical Statistics Unit

Table 37. Utilization of Medical Institutions by Regional Director of Health Services Division, 2014

RDHS Division	Divisional Hospitals Type A			Divisional Hospitals Type B			Divisional Hospitals Type C			Other Hospitals		
	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate	Duration of Stay	Bed Turn Over Rate	Bed Occupancy Rate
Colombo	1.54	65.58	27.87	1.33	107.88	42.35	1.44	81.06	32.37	7.63	40.02	87.95
Gampaha	2.42	74.14	49.89	1.12	140.47	44.29	1.72	139.25	66.26	9.14	25.21	68.90
Kalutara	1.40	75.90	29.46	1.37	89.63	34.16	1.91	73.20	38.77			
Kandy				1.81	70.78	35.95	1.77	74.92	36.67	8.37	15.97	41.16
Matale				1.61	62.62	28.29	2.32	69.60	44.92			
Nuwara Eliya	2.38	36.45	24.74	1.92	61.83	33.50	1.46	79.19	32.65			
Galle	2.27	48.50	30.33	1.57	73.21	31.96	1.71	116.18	55.53	3.33	63.67	60.18
Matara	3.16	66.20	63.22	1.61	82.90	38.56	1.55	71.14	31.40			
Hambantota				1.38	86.59	33.66	1.46	95.27	38.69			
Jaffna				2.13	65.50	39.14	2.24	24.29	14.97			
Kilinochchi				1.47	23.26	9.51	6.10	35.36	60.97			
Mullaitivu	1.07	72.79	22.14	1.60	74.96	32.90	1.61	17.58	8.54			
Vavuniya				1.14	23.51	7.34	1.68	50.34	24.89			
Mannar				1.27	21.16	7.39	1.42	33.47	13.15			
Batticaloa				2.10	72.27	41.94	2.17	88.69	53.76			
Ampara							1.49	67.90	30.54			
Kalmunai				2.23	47.90	30.71	1.74	62.21	29.82			
Trincomalee							1.66	67.89	31.21			
Kurunegala	1.41	71.84	28.42	1.53	70.12	29.72	1.59	73.04	32.21			
Puttalam	2.08	62.18	36.22	1.46	52.14	21.47	1.39	60.75	23.44			
Anuradhapura	1.58	80.03	35.33	1.54	85.27	36.91	1.98	70.41	38.83	4.97	61.13	83.98
Polonnaruwa	1.60	72.71	31.89	1.54	93.45	39.63	1.96	89.64	48.62			
Badulla	2.77	90.65	69.69	1.89	56.37	29.86	1.62	71.22	31.87			
Monaragala				1.61	69.00	30.58	1.22	133.40	44.95			
Ratnapura	1.78	73.94	36.79	1.52	63.31	27.72	1.56	62.09	26.86			
Kegalle	1.47	92.31	38.26	1.88	60.12	31.45	1.78	85.34	43.50	251.57	0.45	161.97
Average	1.85	72.09	37.38	1.62	71.66	32.66	1.74	74.92	36.42	7.96	35.24	81.47

Source: Medical Statistics Unit

Table 38. Average Duration of Stay (Days) in Selected Types of Hospitals per Quarter, 2003 - 2014

Type of Hospital	2003	2004	2005	2006	2007	2008	2009	2010	2012	2013	2014
National Hospital, Colombo	5.0	4.8	4.4	4.4	4.3	4.3	4.2	4.0	3.9	3.9	3.7
Teaching Hospitals				3.6	3.6	3.5	3.4	3.3	3.1	3.2	3.3
Provincial Hospitals [1,2]	4.0	3.9	4.2	3.1	3.3	3.2	3.1	2.6			
Base Hospitals [3]	3.2	3.0	3.0	2.4	2.3	2.2	2.1	2.1			
District Hospitals	2.3	2.3	2.2	1.9	2.0	2.1	2.1	1.8			
Pheriperal Units	2.2	2.2	2.0	1.9	2.0	1.9	1.9	1.6			
Rural Hospitals [4]	2.0	2.1	1.9	1.8	1.9	1.9	2.2	1.6			
Provincial General Hospitals									2.9	2.9	3.2
District General Hospitals									2.4	2.3	2.4
Base Hospitals Type A									2.0	2.1	2.1
Base Hospitals Type B									2.1	2.3	2.1
Divisional Hospitals Type A									1.7	1.8	1.9
Divisional Hospitals Type B									1.7	1.7	1.6
Divisional Hospitals Type C									1.6	1.8	1.7
Childrens' Hospital	3.3	3.0	3.1	2.9	3.3	3.2	3.0	2.8	2.8	2.9	2.8
Eye Hospital	6.7	8.0	7.3	3.8	3.3	3.8	4.4	3.6	4.0	4.2	4.5
Cancer Hospital	9.3	8.9	10.0	8.3	8.2	7.0	7.0	7.0	5.9	5.8	5.1
Mental Hospitals	67.5	54.6	62.8	30.2	60.0	65.9	60.2	27.7	28.7	36.5	38.7
Chest Hospitals	NA	25.0	8.7	14.4	NA	12.5	10.5	14.7	12.3	15.7	14.7
Maternity Hospitals	4.1	4.5	5.5	5.7	3.6	3.3	3.4	3.6	3.5	2.7	3.7
Maternity Homes	2.4	2.4	2.2	3.1	2.6	1.4	1.6	1.6	1.4	1.1	
Leprosy Hospitals				73.3	77.0	87.9	75.0	88.1	84.4	77.6	87.7
Rehabilitation Hospitals				24.5	30.0	26.1	26.9	26.5	24.0	29.3	30.0

[1] Includes Teaching Hospitals upto 2005 *Source : Medical Statistics Unit*
For the year 2009
[2] Includes Provincial General Hospitals and General Hospitals
[3] Includes District Base Hospitals
[4] Includes Estate Hospitals

Table 39. Registered Births and Hospital Births, 1970 - 2014

Year	Registered Live Births [1]	Live Births in Government Hospitals [2]	% of Live Births in Government Hospitals
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[a]	294,120	241,390	82.1
1991[a]	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[b]	330,963	287,514	86.9
1997[b]	325,017	284,955	87.7
1998	322,672	287,514	89.1
1999	328,725	300,866	91.5
2000	347,749	314,352	90.4
2001	358,583	325,813	90.9
2002	367,709	307,272	83.6
2003	370,643	316,465	85.4
2004	364,711	336,642	92.3
2005	370,731	341,539	92.1
2006	373,538	353,361	94.6
2007	386,573	356,852	92.3
2008	373,575	352,523	94.4
2009	368,304	339,437	92.2
2010	364,565*	334,137	91.7
2011	363,415*	338,466*	93.1
2012	355,900*	340,800	95.8
2013	365,792*	347,033	94.9
2014	349,715*	330,898	94.6

* Provisional *Source : [1] Registrar General's Department*
Excludes: *[2] Medical Statistics Unit*
[a] Northern and Eastern Provinces
[b] Kilinochchi and Mullaitivu Districts

Table 40. Live Births, Maternal Deaths, Still Births and Low Birth Weight Babies in Government Hospitals by District, 2014

District	Live Births	Maternal Deaths		Still Births		Low Births [4]	
		Number	Rate [1]	Number	Rate [2]	Number	Rate [3]
Colombo	41,715	11	26.4	272	6.5	6,684	16.0
Gampaha	23,758	-	-	138	5.8	3,826	16.1
Kalutara	16,072	-	-	86	5.3	2,167	13.5
Kandy	28,095	14	49.8	238	8.4	4,935	17.6
Matale	10,171	-	-	60	5.9	1,836	18.1
Nuwara Eliya	9,953	-	-	74	7.4	2,383	23.9
Galle	18,633	1	5.4	103	5.5	2,364	12.7
Matara	11,561	2	17.3	74	6.4	1,823	15.8
Hambantota	10,945	2	18.3	69	6.3	1,269	11.6
Jaffna	8,270	7	84.6	66	7.9	1,063	12.9
Kilinochchi	2,099	-	-	12	5.7	283	13.5
Mullaitivu	1,099	-	-	4	3.6	158	14.4
Vavuniya	3,756	-	-	23	6.1	602	16.0
Mannar	1,435	-	-	17	11.7	183	12.8
Batticaloa	9,018	-	-	49	5.4	1,343	14.9
Ampara [5]	13,335	2	15.0	44	3.3	1,653	12.4
Trincomalee	8,076	-	-	22	2.7	1,272	15.8
Kurunegala	23,392	10	42.7	63	2.7	3,245	13.9
Puttalam	14,213	1	7.0	87	6.1	1,692	11.9
Anuradhapura	15,427	5	32.4	88	5.7	2,471	16.0
Polonnaruwa	7,028	2	28.5	32	4.5	1,332	19.0
Badulla	16,394	4	24.4	126	7.6	3,656	22.3
Monaragala	7,194	-	-	43	5.9	951	13.2
Ratnapura	19,190	2	10.4	120	6.2	3,645	19.0
Kegalle	10,069	1	9.9	61	6.0	2,049	20.3
Sri Lanka	330,898	64	19.3	1,971	5.9	52,885	16.0

[1] Per 100,000 live births

Source : Medical Statistics Unit

[2] Per 1,000 total births

[3] Per 100 live births

[4] Birth weight less than 2,500 grams

[5] Includes Kalmunai RDHS Division

Table 41. Performance of Dental Surgeons by RDHS Division, 2014

RDHS Division	Extraction				D.A.A. Treated	Infection	Leukoplakia	Oral Carcinoma	Restoration				Scaling	Minor Surgery	Prevention Community	Total Visits*
	Deciduous	Permanent Caries	Permanent Periodontal	Other					Temporary	Amalgam	Composite	Advanced Conservation				
Colombo	1,902	32,252	5,244	623	9,629	320	21	6	38,624	15,111	19,692	14,142	9,431	1,885	2,212	180,241
Gampaha	4,702	43,074	10,266	1,078	5,324	302	31	5	27,101	13,658	11,783	2,319	6,692	1,821	4,461	154,413
Kalutara	4,427	29,671	5,562	627	4,488	666	302	18	26,742	10,081	11,601	1,876	4,497	2,210	1,354	121,273
Kandy	1,470	17,583	3,206	768	3,953	180	3	2	10,762	6,503	4,441	1,499	4,162	910	5,223	63,880
Matale	2,211	15,633	3,561	356	3,876	220	22	4	9,915	6,613	4,054	1,369	4,261	690	296	55,756
Nuwara Eliya	969	13,173	4,004	629	3,842	995	2	1	6,017	5,415	2,161	408	1,559	234	60	42,456
Galle	2,488	25,533	4,126	543	1,817	192	3	1	19,308	6,437	9,220	1,174	2,818	1,111	1,379	82,725
Matara	1,213	19,002	4,412	1,756	1,421	98	40	2	15,322	8,206	6,184	2,283	3,612	708	657	68,447
Hambantota	1,535	14,332	4,005	1,738	2,655	183	10	2	10,520	4,545	4,361	1,215	2,169	1,719	204	70,720
Jaffna	3,079	26,285	5,443	893	9,302	208	25	11	13,792	4,841	6,302	3,229	4,411	2,275	1,681	108,117
Mannar	912	5,563	2,346	845	521	195	43	10	3,616	3,118	4,557	462	1,840	620	3,100	38,041
Vavuniya	633	3,612	555	10	83	139	26	10	2,080	200	2,625	354	736	246	1,145	23,724
Mullaitivu	132	1,008	1,100	35	206	29	-	-	532	716	766	235	408	71	334	5,838
Batticaloa	6,881	24,118	3,749	439	1,192	225	12	7	2,758	807	2,788	444	817	404	1,968	59,293
Ampara	258	2,131	17	-	-	36	-	1	2,125	1,566	1,545	501	451	105	775	11,908
Trincomalee	3,349	17,469	5,487	692	2,485	172	18	-	2,802	2,929	2,665	846	2,795	1,155	5	44,673
Kalmunai	5,000	18,584	2,863	503	1,615	221	8	4	4,217	7,508	2,670	1,216	1,576	627	504	65,334
Kurunegala	2,254	12,596	5,677	399	3,147	508	21	5	8,702	7,592	4,731	813	4,896	929	6,244	62,862
Puttalam	2,221	17,812	4,102	119	2,167	154	2	1	3,348	2,855	2,593	1,345	2,190	299	327	54,538
Anuradhapura	1,286	6,821	1,805	881	3,220	140	5	4	6,474	2,206	2,566	1,578	1,885	2,231	84	39,736
Polonnaruwa	2,702	7,945	2,432	247	1,371	13	11	2	4,927	2,751	681	557	2,430	1,206	36	34,868
Badulla	4,870	30,542	4,402	1,307	14,222	642	107	19	21,922	15,570	10,206	2,422	10,040	2,268	1,893	151,190
Monaragala	3,361	16,074	4,929	375	6,643	138	140	24	15,470	7,190	11,526	3,401	6,682	2,617	-	102,526
Ratnapura	3,092	25,502	5,365	312	4,813	620	60	17	31,397	12,306	20,372	3,140	4,732	2,034	1,979	116,324
Kegalle	2,637	23,554	5,098	174	6,413	142	5	14	13,099	7,012	16,449	2,769	4,039	2,367	429	100,040
Sri Lanka	60,947	426,315	94,658	15,175	87,992	6,596	912	156	288,473	148,724	150,090	46,828	85,090	28,375	35,921	1,758,883

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

Source: Medical Statistics Unit

ISBN 978-955-577-998-2