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Message from the Hon. Governor of Central Province

It is my privilege and pleasure to convey my appreciation for the Annual Health Bulletin 2007 prepared

by the Department of Health, Central Province.

Having monitored the progress of the Department through development reviews and informed

discussions, I am quite pleased with its results for the year 2007. The results achieved during the period under review have shown a marked improvement. Therefore I wish to place on record my

commendation for the dedicated services of all categories of staff at all levels, who have all

contributed and worked as a team.

Analyzing the financial disbursement and fund utilization I wish to thank to the Hon. Minister of

Health, Secretary of Health, Provincial Director, all Regional Directors and all health staff who have

given their best to provide quality Health Services to the people in the Central Province. I am confident that you will continue and will improve on these achievements to reach the level of excellence in the

health sector. I am sure that the department will work as a team and work passionately towards

providing the best health service to the people of our province.

In conclusion I wish to thank the Provincial Department of Health for compiling the Annual Health

bulletin for the second consecutive year and wish them well in the coming year.

'If you honour your work, your work will honour you'

Best wishes!

Hon.Tikiri Kobbekaduwa

Governor

Central Province

V

Message from the Hon. Chief Minister of Central Province

Since assuming duties as the Chief Minister 3 years ago, I have always tried to ensure that the two large Departments namely Health and Education are provided with the necessary resources from the Central Provincial Council to ensure that the services provided go uninterrupted, while also identifying adequate funds for development works. This has not been an easy task but I am happy that all efforts have shown very good results when reading through the achievements of the Department. I have also been informed by the Hon. Minister of Healthcare and Nutrition of the exemplary work done by the dedicated team working in the Central Province and proud of the fact that the Central Province has one of the best programs in the health sector.

I have closely monitored the use of funds and evaluated the results achieved and would like to place on record the exemplary leadership qualities of the Hon. Minister of Health, Secretary Health, Provincial Director and all Regional Directors and all health staff who have given their best despite all odds to provide quality health services to the people in the Central Province.

I wish to thank the Provincial Department of Health for putting out the Annual Health Bulletin for the second consecutive year and wish them well in the coming years.

Hon.Sarath Ekanayaka Chief Minister Central Province

VI Message from the Hon. Minister of Health

I am pleased to write this message for the Annual Health Bulletin prepared by the Department of Health Central Province.

Since assuming duties as the Minister a few weeks ago, I have read the annual report and am proud that the Department of Health has been able to use the resources for the maximum benefit of the people. I am equally proud to have a dedicated team of health professionals who have worked tirelessly during the previous years to achieve the results which are given in the bulletin. I will make it

a point to ensure that the Central Provincial Council provides the necessary resources for the health sector, which intern provides a yeoman service not only to those who are sick but more important are the preventive health programs which ensures that people remain healthy. This I believe is the most cost effective of all interventions.

I as the Minister during this short period have heard of the work of health staff at all levels who work as teams, which has made it possible to achieve these results despite all odds. I must place on record the exemplary leadership qualities of my predecessor the Hon. Champika Wijeratne Minister of Health, Secretary Health, Provincial Director and all Regional Directors who have given the necessary guidance and who have gone out of their way to ensure that programs and tasks assigned in 2007 have been completed despite all odds.

I wish to thank the Provincial Department of Health for putting out the Annual Health Bulletin for the second consecutive year and assure them of my support at all times to make the people of the Central Province Healthy.

Hon.Ediriweera Weerawardana Minister Ministry of Health,Indegenous Medicine Social Welfare, Probation & Child Care Services Central Provincial Council

VII Message from the Secretary , Ministry of Health

It is my great pleasure and privilege to write this message for the Annual Health Bulletin prepared by the Department of Health Central Province.

The Central Provincial Council provides the necessary resources to ensure that equitable health services are made available to all people in the Central Province. The Department of Health has been able to use these resources for the maximum benefit of the people and I am extremely proud of the dedicated team of health professionals for putting out the annual health bulletin, which reflects the results achieved during the year.

I sincerely wish that more government departments would put out their annual reports so that the general public , professionals and decision makers are all made aware of the results achieved during the year.

It is my wish that the Provincial Departments of Health with their dedicated staff at Provincial level, District level and Divisional level would continue to provide maximum care to benefit the people in Central Province. The Provincial Department of Health over the last few years have shown exemplary results which has earned the department the "runners up" award at the Provincial level inter department quality awards competitions and regarded as one of the best Departments in the Central Province.

I would like to commend the Provincial Director of Health Services, Regional Directors of Health Services, Kandy, Matale & Nuwaraeliya, other Health Professionals and all the other staff for the achievements gathered from their team work.

Vijitha Bandara Ekanayaka Secretary Ministry of Health,Indegenous Medicine Social Welfare, Probation & Child Care Services Central Council

VIII

Message from the Provincial Director of Health Services

This annual bulletin of the Provincial Department of Health Services, Central Province is published for the second consecutive year with a view to provide information on the achievements of health services provided during the year.

The bulletin mainly covers the areas of morbidity, mortality, resource availability, provision of services and development projects. Based on the feedback of the previous bulletin we have been able to include areas such as details on curative care services, estate health services, dental services, health promotion, drug quality assurance and special achievements etc. which has made this bulletin more comprehensive. We thank all those readers who gave us a constructive feedback.

I wish to place on record my deep appreciation and thanks to all officials in the Central Province, who have given generously their time, knowledge and necessary information for this bulletin. Special thanks are due to the valuable service rendered by the staff of the planning unit that has planned and coordinated the Annual Health Bulletin.

I will be failing in my duty if I do not thank the Directors of TH Kandy, TH Peradeniya, TH Gampola and DGH Nuwara Eliya and their staff for sharing their hospital information which has made this bulletin more comprehensive of the healthcare services provided in the Central Province.

Dr.(Mrs.) Shanthi Samarasinghe Provincial Director of Health Services Central Province.

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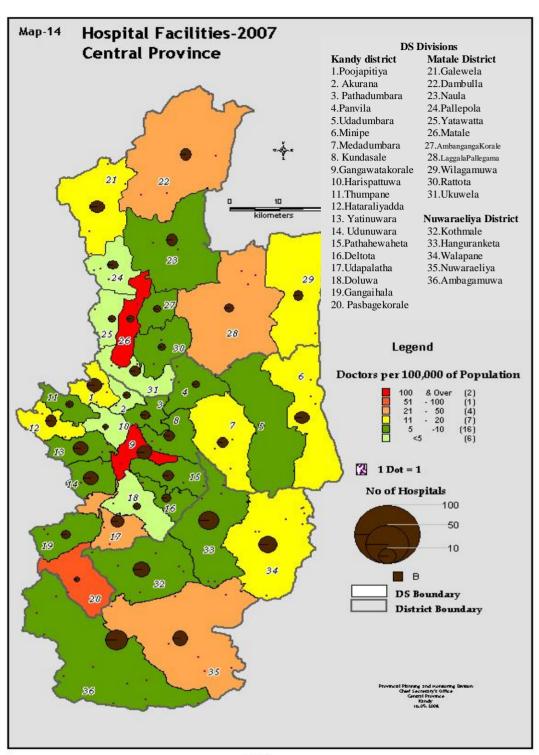
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Key Health Related Indicators.

			Districts		Central	National	
No.	o. Indicator		Kandy	Matale	Nuwara Eliya	Province	
01	Land Areas(sq. km) (Excluding inland waters)	1988	1,917	1,952	1706	5,575	62705 (Survey General's Department 1988)
02	Divisional Secretary Areas	2004	20	11	05	36	324 (Dept of Census and statistic 2004)
03	Grama Niladari Divisions	2004	1,188	545	491	2,224	14,013 (Dept of Census and statistic 2004)
04	Pradesiya Saba	2004	17	11	05	33	256 (Dept of Census and statistic 2004)
05	Villages	2004	2,987	1,355	1,421	5,763	38,259 (Dept of Census and statistic 2004)
06	Municipal Councils	2004	01	01	01	03	18 (Dept of Census and statistic 2004)
07	Urban Councils	2004	04	00	02	06	37 (Dept of Census and statistic 2004)
08	Total population	2001	1,272,500	442,000	703610	2418110	19886000 (Registrar General Department-2006)
09	Urban population (%)	2001	12	8	6	10	14.6 (Dept of census and statistics-2001)
10	Rural population (%)	2001	80	87	41	71	80 (Dept of census and statistics-2001)
11	Estate population (%)	2001	7	5	53	20	5 (Dept of census and statistics-2001)
12	Population density (Per sq. km)	2001	663	226	412	433	317.6 (Dept of census and statistics-2001)
13	Population growth rate (%)	2001	1	1.1	0.7	0.9	1.2 (Dept of census and statistics-2001)
14	Crude birth rate (Per 1000 population)	2007	21.3	20.2	15.8	19.5	19 (Registrar General Department 2007)
15	Crude death rate (Per 1000 population)	2007	6.9	5.5	5.0	6.1	5.8 (Registrar General Department 2007)
16	Maternal mortality rate (per 100,000 live Births)	2007	41.9	32.6	84.1	52.2	44.3 (Family Health Bureau 2005)
17	Child mortality rate (per 1,000 live births)	2003	17.1	12.0	18.0	16.4	13.4 (Registrar General Department 2003)
18	8 Infant Mortality Rate per 1000 Live Births		15.2	10.3	15.6	14.4	11.3 (Registrar General Department 2003)
19	Neonatal Mortality Rate (per 1,000 live births)	2003	12.9	7.9	11.0	11.6	8.7 (Registrar General Department 2003)
20	Number of MOH/DDHS Divisions	2007	21	11	12	44	288 (Medical statistics Unit)
21	Number of Hospitals	2007	53	19	26	98	623 (Medical statistics Unit)
22	Number of Central dispensaries	2007	27	15	22	64	428 (Medical statistics Unit)
23	Medical Officers	2007	1083	171	159	1413	10279 (Medical statistics Unit)
24	Nursing Officers	2007	2384	349	248	3112	24988 (Medical statistics Unit)
25	Medical Officers Per 100000 Population	2007	85.1	38.7	26.3	61.0	51.6 (Medical statistics Unit)
26	Nursing Officers Per 100000 Population	2007	197.4	80.5	40.4	134.2	125.6 (Medical statistics Unit)
27	Number of Inpatients treated	2007	446225	125562	100714	672501	4463000 (Medical statistics Unit)
28	Number of outpatients treated	2007	34066401	1180298	963611	5550510	41429776 (Medical statistics Unit)
29	Number of Hospital Beds per 1000 people	2007	4.8	3.3	2.5	3.5	3.4 (Medical statistics Unit)

1. General information

1.1 Basic facts

The Central Province is located in the central hills of Sri Lanka and consists of the three Districts Kandy, Matale and Nuwara Eliya. The land area of the Province is 5674 square kilometers which is 8.6% of the total land area of Sri Lanka. The Province lies on 6.6°-7.7° Northern latitude and between 80.5°-80.9° Eastern longitudes. The elevation in the Province ranges from 600 feet to over 6000 feet above sea level in the central hills. The Province is bordered by the North Central Province from the North the Mahaweli river and Uma Oya from the east to the south from the mountain range of Adams peak, Kirigalpottha and Thotapala and the mountain ranges Dolosbage and Galagedera from the west.

The mean temperature ranges from 16°C - 28°C in the Province where lower temperatures are recorded in hills in the Nuwara Eliya District.

The Province is divided into three zones namely wet, dry and intermediate according to the rain fall. The south west monsoon provides most of the rainfall to the central hills where Watawala records the highest rainfall of 5024 mm annually while 80% of the Matale District shows a similar rainfall pattern of the dry zone gets its rainfall from the North east monsoon. The rainfall in Dambulla is reported as 1234 mm.

In the Central Province 52% of the land has been cultivated while another 6.3% has been identified as lands which can be cultivated. Of the lands cultivated more than 35% has been cultivated with tea while 14.8% has been cultivated with paddy. The percentage of lands cultivated with coconut and rubber is 4.8% and 2.3% respectively.

1.2 Administrative Divisions

For the purpose of administration the Central Province has 36 Divisional Secretary areas in the 3 Districts. The number of GN areas, villages and local government bodies under each District is given in table.

Table 1.1 Administrative Divisions & Local Government Bodies

Administrative Areas. (District)	Divisional Secretary Areas.	Grama Niladari Divisions	Pradesiya Saba	Villages	Local Government Bodies	
					MC	UC
Sri Lanka	322	14013	256	38259	18	37
Kandy	20	1,188	17	2,987	1	4
Matale	11	545	11	1,355	1	-
Nuwara Eliya	05	491	05	1,421	1	2
Central Province	36	2,224	33	5,763	3	6

Source - Department of Census & Statistics

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The Provincial administration is vested in the Central Provincial Council composed of elected representatives of the people, headed by a Governor who is appointed by His Excellency the President.

1.3 Population

According to the census data 2001 the total population of Central province was 2,418,110 and the estimated population for 2007 was 2,549,917. The annual growth rate for 2007 was 0.9%.

Table 1.2 – Total population and population density of the Central Province

	Sri Lanka	Kandy	Matale	Nuwaraeliya	Central
					province
Total population	18,797,300	1,272,500	442,000	703610	2418110
(census 2001)					
Estimated population	19,886,000	1,347,335	471,180	731402	2,549,917
2007					
Population density	300	663	226	412	433
(persons per square					
Kilometer)					

- **1.3.1 Population Density** The population density for the Central Province was 433 persons per square kilometer. The density was higher than the national average in the Districts of Kandy and Nuwara Eliya while in the Matale District the population density was lower than the national density.
- **1.3.2 Urban Rural population** according to the 2001 census data 70.0%, 20.2% and 9.8% of the population were classified as rural, estate and Urban respectively.
- **1.3.3 Age composition** The age distribution is given in fig.1.1.The visible feature of the age distribution is the increase of the proportion of the older age groups. A detailed age breakdown is given in table 1.3.

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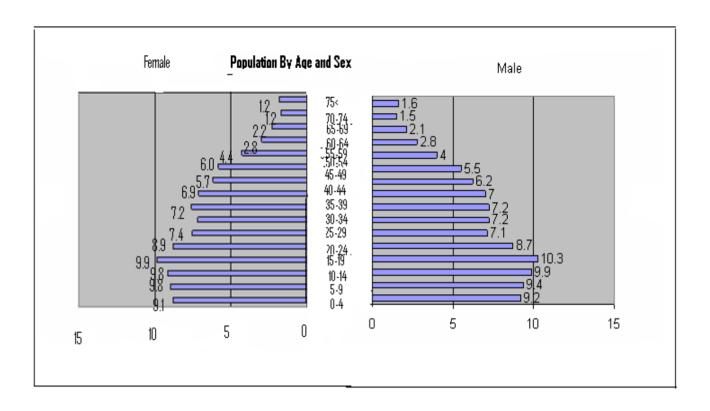
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Table 1.3. Percentage distribution of population of Central Province by Age & Sex .

Year	Ка	ndy	Ma	atale	N'I	Eliya	Cer	ntral Provi	nce
	Male	Female	Male	Female	Male	Female	Male	Female	Total
0-4	9.0	8.6	8.6	8.6	9.9	9.1	9.2	8.8	9.0
5-9	9.6	8.7	8.8	8.6	9.8	9.8	9.4	9.0	9.2
10-14	9.6	9.2	9.5	8.7	10.7	9.8	9.9	9.2	9.6
15-19	10.1	9.4	10.9	10.4	10.0	9.9	10.3	9.9	10.1
20-24	9.1	8.9	8.8	8.5	8.3	8.9	8.7	8.8	8.8
25-29	6.8	7.7	7.8	7.4	6.8	7.4	7.1	7.5	7.3
30-34	7.2	7.2	7.3	7.1	7.1	7.2	7.2	7.2	7.2
35-39	7.3	7.5	7.3	7.8	6.9	7.5	7.2	7.6	7.4
40-44	6.9	6.9	7.1	7.5	7.0	6.9	7.0	7.1	7.1
45-49	6.1	6.1	6.7	6.9	5.9	5.7	6.2	6.2	6.2
50-54	5.4	5.8	5.6	5.5	5.5	6.0	5.5	5.8	5.7
55-59	4.0	4.3	3.8	4.1	4.3	4.4	4.0	4.3	4.2
60-64	3.0	3.4	2.6	2.7	2.9	2.8	2.8	3.0	2.9
65-69	2.4	2.5	2.0	2.3	2.0	2.2	2.1	2.3	2.2
70-74	1.6	1.9	1.6	1.9	1.4	1.2	1.5	1.7	1.6
75<	1.7	2.1	1.7	2.0	1.3	1.2	1.6	1.8	1.7

Source: Census 2001

Fig. 1.1 Age composition



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- **1.3.4 Sex composition** The 2001 census data reported the sex ratio as 97.9 for Sri Lanka while the figure for the Province is reported as 97.1
- 1.3.5 Population by ethnicity and religion The 2001 census data shows that 65.3% of the total population living in the Central Province are Sinhalese, while 20.2% are Indian Tamil, 9.3% Sri Lanka Muslim and 4.7% Sri Lanka Tamil. The detailed breakdown by District is given in table 1.4. The distribution of the population in the Central Province according to religion show that 64.5% are Buddhist, while 22.3%, 9.7% and 3.5% practice Hindu, Islam and Christianity respectively.

Table. 1.4 Percentage distribution of population by Ethnic Groups

	Sinhalese	Sri Lankan Tamil	Indian Tamil	Sri Lankan Moor	Burgher	Malay	Others
Sri Lanka	82.0	4.3	5.1	7.9	0.2	0.3	0.1
Kandy	74.0	3.9	8.4	13.3	0.2	0.2	0.1
Matale	80.2	5.4	5.3	8.8	0.1	0.1	0.1
Nuwara Eliya	40.0	5.9	51.3	2.5	0.1	0.1	0.0
Central Province	65.3	4.7	20.2	9.3	0.1	0.1	0.1

Source: Census 2001

Table.1.5 Percentage distribution of population by religion

	Buddhist	Hindu	Islam	Roman Catholic	Others
Sri Lanka	76.7	7.9	8.5	6.1	0.9
Kandy	73.1	10.7	13.7	0.5	0.05
Mat ale	79.1	9.7	9.0	2.6	0.01
Nuwara Eliya	39.5	51.3	2.9	6.2	0.1
Central	64.5	22.3	9.7	3.5	0.06
Province					

Source: Census 2001

1.4 Vital Statistics

Registration of births and deaths was made compulsory in 1867 with the enactment of the civil registration laws which conferred the legal sanction for the registration of events namely live births, deaths, still births and marriages. The compilation of vital statistics has 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.

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1.4.1 Crude Birth Rate (CBR)

The crude birth rate for the Central Province for the year 2007 is reported as 19.5 per 1000 population which was slightly higher than the CBR of Sri Lanka which is reported as 19.0 per 1000 population. The CBR for Kandy, Matale and Nuwara Eliya is 21.3, 20.2 and 15.8 per 1000 population respectively.

1.4.2 Crude Death Rate (CDR)

The crude death rate in the Central Province for the year 2007 is reported as 6.1 per 1000 population which is slightly higher than the national CDR of 5.8 per 1000 population. The CDR for Kandy, Matale and Nuwaraeliya is 6.9, 5.5 and 5.0 per 1000 population respectively.

1.4.3 Maternal Mortality Rate (MMR)

Maternal deaths are reported to three different reporting agencies namely Registrar General's Department, Hospital statistics and Maternal Mortality active surveillance system coordinated by the Family Health Bureau of the Ministry of Healthcare and Nutrition. The most recent MMR released by the Registrar General's office for the year 2002 in the Central Province is 16.2 per 100,000 LB.According to Government hospital statistics the figure for

2003 is reported as 38.2 per 100,000 LB. The MMR for the Central Province through MMR active surveillance system is reported as 52.2 per 100,000 LB For 2007.

1.4.4 Under Five Child Mortality Rate (CMR)

The Child Mortality Rate reported by the Registrar General's Department for the Kandy, Matale, Nuwaraeliya districts and Central Province for the year 2003 is 17.1, 12.1, 18.0 and 16.4 per 1000 live births respectively while this value for Sri Lanka is 13.5 per 1000 live births.

1.4.5 Infant Mortality Rate (IMR) and Neo natal Mortality Rate (NNMR)

The IMR and NNMR has declined over the last few decades and the figure for the Central Province of IMR for the year 2003 is 14.4 per 1000 LB much higher than the national figure of 11.3 per 1000 LB. The Neonatal Mortality Rate for the Central Province is 11.6 per 1000 LB.for the year 2003

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1.4.6 Total Fertility Rate (TFR)

The level of fertility is measured by TFR is estimated as 1.9% for the Central Province for the period 1995 -2000. The estate sector shows a higher TFR of 2.4% during the period 1995-2000.

1.4.7 Life Expectancy

The life expectancy at birth is 71.7 and 76.4 years for males and females respectively. The rapid increase in the average life span together with widening gap between males and females longevity is due to the reduction of infant and child mortality and also the reduction of mortality of women of the child bearing age.

1.5 Socio - economic Indicators

1.5.1 Literacy Rate-

The literacy rate has increased over the last few decades while the census 2001 report the literacy rate of 91.0% for Sri Lanka. The literacy rate continues to be lowest in the Nuwara Eliya Distrct and was reported as 82.6% while female literacy rate in Nuwaraeliya is only 77.7%.

Table-: 1.6 Literacy rate of persons 10 years and over (as a percentage) in 3 districts in Central Province

	Total	Male	Female
Sri Lanka	91.0	92.4	89.7
Kandy	90.5	92.4	88.7
Matale	88.3	90.2	86.4
Nuwaraeliya	82.6	87.6	77.7

Source: Census 2001

1.5.2 Level of Education -:

According to the census 2001, out of the population 5 years and above approximately 6.3 % of Sri Lankans had not been to school and another 22.3 % had not completed their primary education while these values for Nuwaraeliya have increased upto 13.2% and 29.8% respectively adding to a total of 43.0%. In Nuwaeliya, 46.5% of females have not been to school or not completed primary education.

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Table-: 1.7 Percentage distribution of population (5 years and over) by educational attainment by sex in 3 districts of Central Province

		Sri Lanka	kandy	Matale	Nuwaraeliya
No schooling	All	6.3	6.8	7.3	13.2
	Male	4.7	4.9	5.2	9.4
	Female	7.8	8.6	9.4	17.0
Attended / passed	All	22.3	21.6	25.3	29.8
grade 1-5	Male	23.0	22.7	26.6	30.2
	Female	21.4	20.6	23.8	29.5
Passed grade 6-10	All	39.6	37.9	41.0	35.5
	Male	41.3	40.1	43.2	38.8
	Female	37.9	35.9	38.9	32.3

Passed	All	18.8	19.4	16.5	12.1
GCE(O/L)/NCGE/SSC	Male	18.4	19.1	15.7	12.4
	Female	19.2	19.7	17.2	11.7
Passed	All	9.4	10.6	7.5	4.6
GCE(A/L)/HNCE/HSC	Male	8.6	9.5	6.6	4.5
	Female	10.3	11.6	8.3	4.6
Degree and above	All	1.2	1.5	0.9	0.4
	Male	1.3	1.6	1.0	0.5
	Female	1.1	1.4	0.8	0.3

Source- Census 2001

1.5.3 Household Size-

The National average for household size is 4.1 persons per household while this figure for Kandy, Matale and Nuwara Eliya is 4.2, 3.9 and 4.2 persons per household respectively.

1.5.4 Age dependency ratio

Table.1.8 Age Dependency Ratio of three districts in Central Province

	National	Kandy	Matale	N'Eliya
Below 15 yrs	39.4	41.4	40.3	40.2
65 yrs or more	10.9	12.0	13.6	8.8

Source: DHS 2006/07

Young age dependency ratio of Kandy and Matale districts are nearly 3 times greater than that of old age dependency ratio and this value for Nuwaraeliya district has increased up to 4 times.

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1.5.5 Access to safe drinking water-

89% of households in Sri Lanka have access to source of safe drinking water while in Kandy this figure is 91.5%, in Matale about 82% and in Nuwara Eliya it is about 72.4 percent.

Table.1.9 percentage of households by availability of safe drinking water in 3 districts of Central Province

	National	Kandy	Matale	N'Eliya
Protected well	46.4	26.1	43.5	9.4
Tube well / Spring protected	9.7	13.7	16.0	53.0
Piped into dwelling/yard/Public	32.9	51.7	22.4	10.0
tap/ Tap outside dwelling				
Unsafe sources	11.0	8.5	18.1	27.6

Source: DHS 2006/07

1.5.6 Sanitation Facilities-

8.5% of the households of Nuwaraeliya district do not have any type of facility for safe sanitation and this value is 3 times higher than the national value which is 2.5%.

Table.1.10 -Percentage of households by availability of sanitation facilities in 3 districts of Central Province

	National	Kandy	Matale	N'Eliya
Water sealed	91.7	91.9	75.2	75.7
Pit toilet	5.8	6.7	21.8	15.8
No facility	2.5	1.4	3.0	8.5

Source: DHS 2006/07

1.5.7 Electricity-

80.1% Households in Sri Lanka have electricity while this figure for Kandy, Matale and Nuwara Eliya are 84.4%, 67.0% and 79.5% respectively.

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1.5.8 Source of cooking fuel

Table.1.11 -Main source of cooking fuel of the households in 3 districts of Central Province

	National	Kandy	Matale	N'Eliya
Firewood	78.0%	83.0%	92.0%	89.0%

LP gas	17.0%	15.4%	4.8%	7.4%
Other	5.0%	1.6%	3.2%	3.6%

Source: DHS 2006/07

More than 80% of the households in all 3 districts use firewood as the main source of cooking.

1.5.9 Use of mosquito nets and coils

Table.1.12 Percentage of households using Mosquito nets and coils in 3 districts of Central Province

	National	Kandy	Matale	N'Eliya
Mosquito nets	64.0	50.0	57.0	24.0
Mosquito coils	12.0	19.7	18.9	22.8
Other	24.0	30.3	24.1	53.2

Source: DHS 2006/07

Only 46.8% households in Nuwaraeliya district use mosquito nets or coils while this value for Kandy and Matale districts exceeds 70%.

1.5.10 poverty

Poverty Headcount Index

Percentage of population below the poverty line is defined as the Poverty Headcount Index. According to the Household Income and Expenditure Survey (2006/07) done by Department of Census and Statistics, Poverty Headcount Index for Sri Lanka the is 15.2% and the values for Kandy, Matale and Nuwaraeliya districts are 17.0%, 18.9% and 33.8% respectively. The value for Nuwaraeliya district is about 2 times greater than that of national value.

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Table -: 1.13 Per capita expenditure (average monthly) on Housing, Health, Education and Transport by District.

Per cap	oita Per capi	ta Per capita	Per capita
expend	iture on expendi	ture on expenditur	e on expenditure on
Housing	g Health	Education	Transport

	Poor	Non	Poor	Non	Poor	Non	Poor	Non
		poor		poor		poor		poor
	(Rs)							
Sri Lanka	170	735	37	194	31	178	58	530
Kandy	168	738	31	124	28	173	63	492
Matale	164	506	31	111	20	109	76	453
N'eliya	167	409	33	107	33	114	38	164

Source: Household Income and Expenditure Survey-2006/07- Department of Census and Statistics

per capita expenditure on housing, health and education by poor people are almost same in all 3 districts as well as with the national value. However, expenditure on transport by poor in Nuwaraeliya district is very much less than national value.

1.6 Maternal Health

1.6.1 Maternal care

According to DHS 2006/07, aimost all the mothers in 3 districts have received antenatal care from a health professional. However, only 84% of mothers of Kandy were protected against neonatal tetanus. The survey further reported that more than 95% of the mothers in all 3 districts have received assistance of a skilled health person at their last delivery. However in Nuwaraeliya, about 5% of the deliveries take place outside a health facility and also without an assistance of a health professional.

Table 1.14 Selected maternal care indicators of 3 districts in Central province

	Percentage with antenatal care from a health professional	Percentage whose last live birth was protected against neonatal tetanus	Percentage delivered by a health professional	Percentage delivered in a health facility
Sri Lanka	99.4%	90.6%	98.5%	97.9%
Kandy	99.5%	84.2%	99.3%	98.5%
Matale	100.0%	95.5%	98.3%	99.8%
Nuwaraeliya	99.3%	93.6%	95.8%	95.0%

Source - DHS 2006/07

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1.6.2 Median age at marriage-

The median age at marriage in women in Sri Lanka is 21.7. This figure for Kandy is 22.2years while in Matale and Nuwara Eliya it is 21.5yrs.

1.6.3 Desired family size-

Currently married women in Sri Lanka prefer small families. 53.2% of women would like to have 2 or less than 2 children while only 18.9% women prefer 4 or more children.

In Kandy district 45.2% of women would like to have 2 or less than 2 children while 23.5% women prefer to have 4 or more children.

In Matale district 44.7% of women would like to have 2 or less than 2 children while only 19.5% women prefer to have 4 or more children.

In Nuwara Eliya 45.7% of women prefer to have 2 or less than 2 children while 17.6% of women prefer to have 4 or more children.

1.6.4 Current use of contraception-

The total number of estimated currently married women in Sri Lanka is 3,299,875. Out of those 68.3% of women are currently using contraception.

Table: 1.15 Currently married women by use of contraceptive methods.

Method	Sri Lanka		Kandy		Matale		Nuwara Eliya	
	No:	%	No:	%	No:	%	No:	%
Total	3299875	100	233076	100	67376	100	113074	100
Not using*	1045493	31.7	72354	31.0	19425	28.8	34732	30.7
Any method	2254382	68.3	160722	69.0	47951	71.2	78342	69.3
Any modern method	1729711	52.3	132870	57.0	41161	61.1	71269	63.0
Modern								
permanent								
methods:	560513	17.0	46403	19.9	14243	21.1	43305	38.2
Sterilization								
Modern temporary								
methods:								
PIlls	268266	8.1	21789	9.3	5451	8.1	6243	5.5
IUCD	212491	6.4	14850	6.4	6715	10.0	**	**
Injection	491713	14.9	34541	14.8	11139	16.5	13533	12.0
Condoms	185887	5.6	15288	6.6	**	**	**	**
Norplant	**	**						
	**	**						
Any traditional	524671	16.0	27851	11.9	6790	10.1	7073	6.3
method:								
Safe period	332968	10.1	16928	7.3	**	**	**	**
Withdrawal	190014	5.8	10653	4.6	**	**	**	**
Other	**	**	**	**				

Source - DHS 2006/07

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1.7 Child Health and Nutrition

^{*}including pregnant women

^{**} Reliable estimates cannot be provided due to small cell size.

- In Sri Lanka, in the 5-15 year age group, about 99% have ever attended a school. This figure in Kandy, Matale and Nuwara Eliya are 99.2%, 98.5% and 98.1% respectively.
- 10.3% of currently school attending children in the 5-17 year age group in Sri Lanka do not have enough school books. This figure in Kandy, Matale and Nuwara Eliya are 8.7%, 19.6% and 29.7% respectively.
- Fathers of 3.7% of the children in the 0-17 year age group in Sri Lanka were not alive at the time of the survey. This figure for Kandy and Nuwara Eliya is 2.9% for both districts.

1.7.1 Child Nutrition

The DHS surveys conducted in 1993 and 2000 have identified that although the nutritional status has improved over the years, the rate of decline is unacceptably slow. The nutrition indicators in the central Province is much lower than the national average. Special attention is required to improve the nutrition status of children in the Central Province.

Malnutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Table .1.16 Shows the nutritional status among children below 5 years of age and it clearly shows that the children in Nuwaeliya is severly undernourished (height for age) compared to other 2 districts and also with the national value.

Table 1.16 Percentage of children under five years classified as malnourished according to 3 anthropometric indices of nutritional status: height-for-age (chronic / stunted), weight-for-height (acute on chronic / underweight) and weight-for-age (acute / wasted), by three districts of Central Province

	Height-for-age % below % below		Weight-fo	r-height	Weight-for-age		
			% below % below		% below	% below	
	3 SD	2 SD	3 SD	2 SD	3 SD	2 SD	
Sri lanka	4.2%	18.0%	3.0%	15.0%	3.8%	21.6%	
Kandy	2.4%	18.1%	2.1%	15.7%	4.4%	25.3%	
Matale	6.7%	19.2%	2.5%	11.8%	4.8%	23.2%	
N'Eliya	13.5%	40.8%	2.0%	10.5%	5.4%	25.3%	

Source - DHS 2006/07

1.7.2 Exclusive Breast Feeding

The proportion of mothers who have exclusively breast fed during the first 4 months at their last birth in Sri Lanka is 82.7 %.

This figure for the Kandy District is 84.8% and for the Matale and Nuwara Eliya districts is 90.3% and 69.5% respectively.

1.7.3 Birth Weight

16.1% of children in Sri Lanka have low birth weight (less than 2.5kg) while this figure for Kandy, Matale and Nuwara Eliya is 19.3%, 21.9% and 33.5% respectively.

1.7.4 Immunization Coverage

97% of children between 12-23 months in Sri Lanka have received specified vaccines BCG, Polio, DPT and Measles by 12 months of age. The figures for Kandy, Matale and Nuwara Eliya Districts are 98.3%, 95.7% and 95.2% respectively.

Table :-1.17 Percentage of children aged 12-23 months who received specific vaccines

	BCG	DPT1	DPT2	DPT3	Polio1	Polio2	Polio3	Measles	All	No vaccinations	% with a vaccination card
Sri lanka	99.5	99.7	99.6	99.4	99.6	99.6	99.3	97.1	96.9	0.3	93.0
Kandy	99.6	100.0	100.0	100.0	100.0	100.0	100.0	98.8	98.3	0.0	94.1
Matale	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.7	95.7	0.0	96.8
N'Eliya	97.9	97.9	97.9	96.1	97.9	97.9	95.2	97.0	95.2	2.1	81.7

Source - DHS 2006/07

Nuwara Eliya district has the second highest number of children without any vaccinations, the highest being recorded in Badulla. Nuwara Eliya district also has the highest percentage of children without a vaccination card in Sri Lanka.

2. ORGANIZATION OF HEALTH SERVICES

2.1 Introduction

As in other parts of the country, both public and private sectors provide health care to the people in Central Province. However, public sector plays the major role in providing health care for the people in this Province. The private sector and estates organizations also provide health care to a lesser extent. The Department of Health Services of Central Government and provincial government cover the entire range of preventive, curative, rehabilitative and promotive health care services in the Province.

The private sector provides mainly the curative care through outpatient services. This includes few private hospitals with indoor facilities, full-time general practitioners, government doctors who are engaged in part-time private practice out side their duty hours and other private facilities like laboratories and pharmacies. Recently, few of non-government organizations came forward to assist the government to strengthen preventive care services. Nearly 98% of inpatient care is provided by the government institutions. Preventive, promotive and rehabilitative care is also provided through public sector.

Western (allopathic), Ayurvedic, Unani, Siddha, and Homeopathy systems of medicine are practiced in Central Province. Of these, Western (allopathic) medicine is the main sector catering for the need of the vast majority of the people. In the Central Province, the Department of Health Services is mainly concerned about western medicine. The Department of Ayurveda also provides health care for a significant number of people in the province.

Central Province is equipped with an extensive network of health care institutions. Primary and secondary health care institutions in the curative sector as well as preventive and rehabilitative care institutions are mainly managed by the Provincial Health Department and tertiary care health institutions are managed by the line ministry.

2.2 Provincial Health Policy

Vision: - Leading the Central Province prosperity making its people healthy; physically, mentally, socially and spiritually.

Mission: - To achieve the highest attainable health status by responding to people's needs, working in partnership and ensuring comprehensive high quality, equitable, cost effective and sustainable health service in the central province.

Goal: - To protect and promote the health of people in the Central Province.

2.3 Provincial Health Administration :-

Previously, the entire health system of Sri Lanka was functioned under a Cabinet minister of the central government. However, wiith the implementation of Provincial Council Act in 1989, the health services were devolved, resulting in the Ministry of Health at the national level and separate Ministries of Health in the nine provinces.

The Central Ministry of Health plays a major role in development of national health policies and guidelines, training of medical and Para- medical staff, management of teaching hospitals and specialized medical institutions and bulk purchase of medical requisites. The Provincial Health Department is totally responsible for management and effective implementation of health services within the province, development of policies and guidelined for the Province and also human resource management within the Province.

In the Central Province, the Department of Provincial Health Services is under the Ministry of Health, Indigenous Medicine, Social Welfare, Probation & Child care Services. There is a Minister and a Secretary to the Ministry.

The Provincial Director is the head of the Provincial Department of Health Services. There are 3 Regional Directors of Health Services for each District. Each RDHS area is geographically similar to the administrative units of district secretariats. The Medical officers of Health (MOH) are mainly responsible for the preventive care of the respective divisional secretary areas and the medical officers in charge of the hospitals are responsible for provision of curative care through their institutions.

2.4. Health facilities in Central Province

2.4.1 Curative health facilities

The network of curative care institutions ranges from sophisticated teaching hospitals with specialized consultative services to small central dispensaries, which provide only out patient services. The distinction between hospitals is basically made on the size and the range of facilities. There are three levels of curative care institutions.

Primary Care Institutions a)

- **★** District Hospitals
- Categorized as **Divisional Hospitals (DH)** in ★ Peripheral Hospitals the current Classification.
- ★ Rural Hospitals
- ★ Central Dispensaries and Maternity Wards categorized as Primary Medical Care Units (PMCU) in the current classification

b) **Secondary Care Institutions**

- District General Hospitals (DGH)
- District Base Hospitals (DBH)

c) Tertiary Care Institutions

- Teaching Hospitals (TH)
- Provincial Hospitals (PH)

Fig ;-2.1 PROVINCIAL HEALTH ORGANIZATION STRUCTURE

PROVINCIAL HEALTH ORGANIZATION STRUCTURE

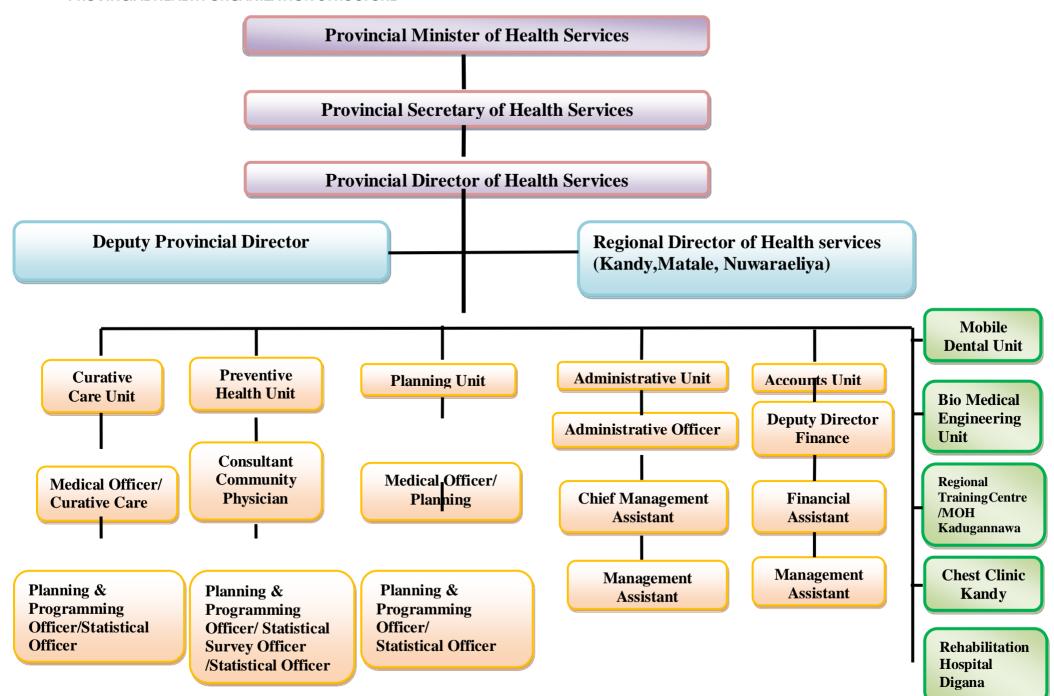
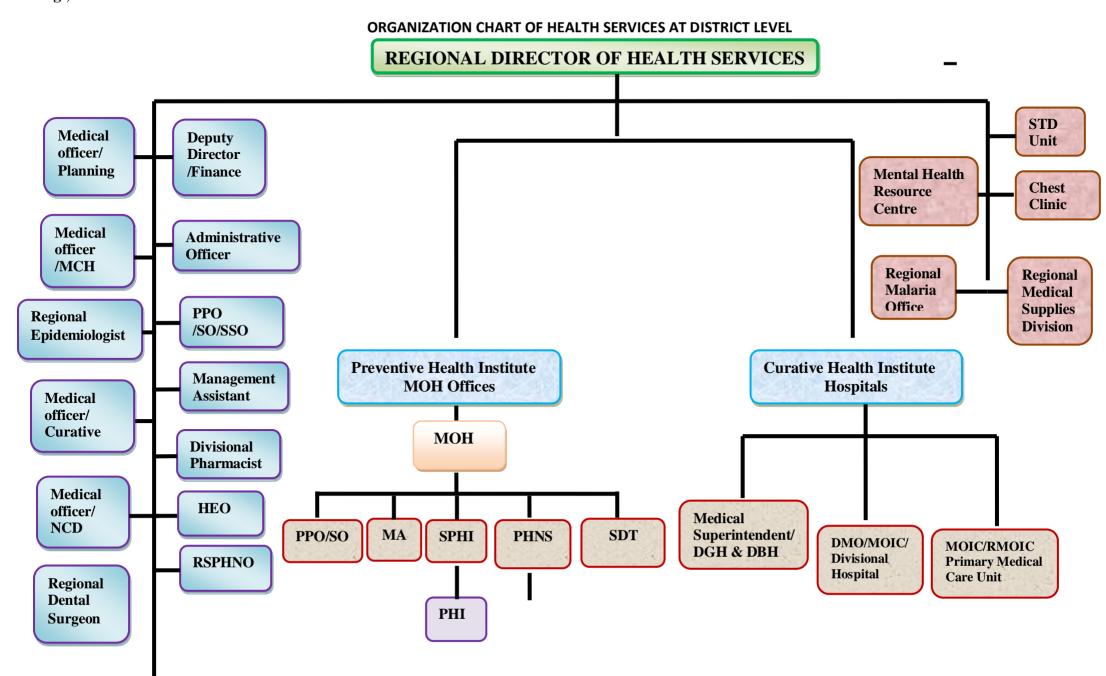
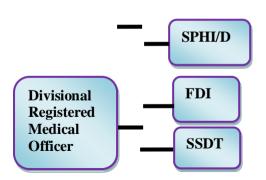
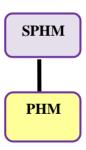


Fig: -2.2 REGIONAL HEALTH ORGANIZATION STRUCTURE







2.4.2 Preventive health facilities

Preventive care is provided through a well organized system of MOH offices as described earlier.

Summary of health care institutions and field areas in the three districts in the province is given in table 2.1. The details of this table and the names of the curative care institutions are given in annexure

Table 2.1 - Summary of health care institutions and field areas in Kandy, Matale and Nuwaraeliya districts in Central province in 2007

	МОН	PHI	PHM	TH	DGH and	DH	PMCU	Specialized
	areas	areas	areas		DBH			units
Kandy	21	69	427	03	02	48	27	10
Matale	11	26	138	-	02	18	15	05
Nuwaraeliya	08	33	234	-	03	22	22	03
Central	40	128	799	03	07	89	65	18
province								

 Kandy Municipal area comes under local government Teaching hospitals Kandy, Peradeniya and Sirimawo Bandaranayake hospital for children, DGH Nuwaraeliya and DBH Gampola come under line ministry.

Table-:2.2 - Summary of available number of wards and bed strength in institutions under Central provincial health department

		No. of		No of wards		No of	
		instit	utions			beds	
		2006	2007	2006	2007	2006	2007
Secondary	Kandy	01	01	18	18	439	468
care	Matale	02	02	29	30	875	897
institutions	Nuwaraeliya	00	02	00	12	00	194
Primary	Kandy	74	75	178	181	2069	2097
care	Matale	33	33	54	57	600	622
institutions	Nuwaraeliya	46	44	106	94	1346	1203
Central province		156	157	385	392	5329	5481

PMCU Kalugamuwa was added to primary care institutions list in Kandy district and there was no other major change in primary care delivery system in the province during 2007.

Two divisional hospitals (Dickoya and Rikillagaskada) have started functioning as secondary care institutions (District Base Hospitals) since 2007 with specialist facilities.

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Table -: 2.3 – Total number of beds and beds per 1000 population in all government health institutions (including line ministry institutions) in 3 districts in Central Province - 2007.

	No of beds	No. of beds per 1000 population
Kandy	6074	4.8
Matale	1519	3.4
Nuwaraeliya	1691	2.5
Central province	9284	3.5
Sri Lanka	67024	3.4

Central Province has bed strength (per 1000 people) closer to the national value. However, there is lesser number of beds (per 1000 people) within Nuwaraeliya district compared to other districts and national value. These values do not include the bed strength of the hospitals managed by estates and these hospitals also play a major role in provision of health care within Nuwaraeliya district. With the effective implementation of the government programme for estate health development which includes taking over of estate hospitals to the government, these values may also reach the national values.

Table 2.4 – Number of private hospitals and beds within 3 districts in Central Province - 2007

	No. of hospitals	No. of beds
Kandy	9	296
Matale	1	12
Nuwaraeliya	1	15
Central Province	11	323

Considering the private sector, Kandy district plays a major role in provision of health care through 9 private hospitals whereas Matale and Nuwaraeliya districts have only 1 private hospital each.

2.5 Health Manpower

Table 2.5 The numbers of all Staff categories of health staff in Central provincial health department in 2006 and 2007 (as at 31st December)

No.	Designation	No. of staff 2006	No. of staff 2007
1	Provincial Director of Health Services	1	1
2	Deputy Provincial Director (Medical Services)	1	1
3	Regional Director of Health Services	3	3
4	Medical superintendents	2	3
5	Medical officers	467	492
6	Medical specialists - Consultants	29	37
7	Dental specialists - Consultants	1	1
8	Dental surgeons	64	73
9	Regional Dental Surgeon	3	3
10	Divisional Registered Medical Officer	3	3
11	Registered/Assistant Medical Officers	220	223
12	Deputy Director (Finance)	4	4
13	Statistical officer	39	40
14	Nursing Officer- special grade	6	03
15	Hospital Sisters	34	36
16	Nursing officer	833	908
17	Supervising Public Health Midwife	41	41
18	Public Health Midwife	922	1064
19	Divisional Public Health Inspector	1	4
20	Supervising Public Health Inspector	3	7
21	Public Health Inspector	138	146
22	Regional Supervising Public Nursing Officer	3	3
23	Supervising School Dental Therapist	1	1
24	Public Health Nursing Tutor	5	5
25	Divisional Pharmacist	3	3
26	Public Health Nursing Sister	29	31
27	Pharmacist	35	37
28	Medical Laboratory Technologist	25	31
29	Microscopist (PHLT)	22	22
30	Radiographer	6	8
31	E.C.G. Recordist	5	6
32	Ophthalmic Technologist	2	5
33	Physiotherapist	4	9

34	Special Grade Dispenser	0	3
35	Dispenser	129	131
36	School Dental Therapist	57	55
37	Food & Drug Inspector	3	2
38	Health Education Officer	8	7
39	Hospital Diet Steward	2	3
40	Cooks	4	4
41	House Warden	2	2
42	Hospital Attendants	616	597
43	Packer	1	2
44	Public Veterinary Dog Vaccinator	8	9
45	Unit Controller Supervisor	2	3
46	Entomological Assistant	7	7
47	Regional Malaria Officer	2	2
48	Public Health Field Officer	54	46
49	Spray Machine Operator	135	145
50	Administrative Officer	5	5
51	Management Assistant	181	216
52	Ward Clerk	6	6
53	Driver	139	137
54	Programming & Planning Officer	60	57
55	Statistical Survey Officer	3	3
56	Medical Record Assistance	49	52
57	Progrmme Assistant	8	8
58	Data Entry Operators	3	3
59	Office Aide /KKS	12	12
60	Hospital Overseer	15	12
61	Watcher	5	5
62	Ordinary Laborers	536	527
63	Sanitary Laborers	897	896
64	Telephone Operator	4	3
65	Dental Clinic Laborers	7	4
66	Lab Orderly	1	1
67	Circuit Bungalow Keeper	1	2
68	Occupational Therapist	0	2
69	Development Assistant	0	1
70	Planning & Programming Assistants	1	1
71	Engineer (III)	1	1
72	Technical Officer	1	1
73	Medical Record Officer	0	1
	Grand Total	5923	6234

There is considerable increase of some staff categories such as consultants, medical officers and dental surgeons, nursing officers, public health midwives and inspectors, paramedical staff categories and management assistants during 2007. However, numbers of some other

categories such as dispensers, drivers, attendents and labourers have not increased accordingly.

There were **61** doctors and 134 nurses respectively serving for 100000 people in the province with in the health institutions in central province (including line ministry institution

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Organization of Health Services

Table . (2.6) Cadre information of institutions under line ministry 2007

Designation		EXSISTING CADRE					
	TH Kandy	TH Peradeniya	DBH Gampola	DBH NuwaraEliya	Sirimawo Bandaranayake		
Medical Specialists (Consultants)	63	05	07	16	10		
Medical Officers	634	123	52	72	62		
Dental Surgeons	27	43	02	07	0		
Nursing Officers	1481	510	151	98	42		
Medical Laboratory Technologists	45	12	03	09	7		
Pharmacists	39	21	08	06	2		
ECG Technicians	13	06	03	02	3		
Radiographers	33	11	02	03	4		
Physiotherapists	15	04	00	01	1		
Occupational Therapists	01	02	00	00	0		
Hospital Midwife	48	51	12	17	0		
Attendants	218	00	12	23	0		
Laborers	264	335	31	51	62		

Curative care Services

3. Curative care services

The curative health services in the state sector is characterized by a very busy and overcrowded system of Primary, Secondary and Tertiary Healthcare Institutions. In spite of being a relatively large province (population of 254,9917) with diverse climatic and geographic variations, the Central Province has achieved a reasonable improvement in the health status of its people during the last couple of years.

Curative care is provided to the people in Central Province through a network of institutions as described in chapter two. These include **2 tertiary care institutions**, **5 secondary care institutions 153 primary care institutions** and **17 specialized institutions**. Of these three secondary care institutions, all primary care institutions and all specialized institutions come under Central Provincial Health Department.

The health seeking behavior in the Province as in the rest of the island is thus that many people visit tertiary and secondary care institutions bypassing primary health institutions. This causes overcrowding at the level of secondary and tertiary care institutions and underutilization of resources at the primary care level. In 2007, 1645842 and 435108 people have received treatment as OPD and in-ward patients respectively from secondary and tertiary care hospitals compared to 3904668 and 237393 received treatment as OPD and inward patients respectively from 153 primary care institutes spread out in the province. Secondary care institutions consist of the four common specialities, Medicine Surgery, Pediatrics, Gynecology and Obstetrics and other specialties such as Eye, ENT and Dermatology. Essential back up services are available at these institutions including laboratory services and basic Radiological services. The laboratory services consist of basic biochemical, hematological, bacterial, and histopathological investigations.

3.1 Primary care services

Primary care services to the people in Central Province are delivered through Divisional Hospitals (DH) and Primary Medical Care Units (PMCU).

These institutions provide both outpatient and inpatient care. Primary health care services are delivered by 1543 Divisional Hospitals and PMCU scattered throughout the province. They provide basic health facilities for the treatment of minor ailments, referral to secondary and tertiary care institutions for appropriate treatment, provision of antenatal care and follow up of patients referred from secondary or tertiary care institutions.

Although these institutions are also being developed to provide better health care for the local population the general trend is for them to seek medical care from secondary or tertiary care institutions, possibly due to the misconception that the bigger the hospital the better the care. This has drastically reduced the bed occupancy rate at primary care institutions compared to larger hospitals in urban areas of the province. Thus there is immense overcrowding at the level of secondary and tertiary care hospitals and gross underutilization at the level of primary care institutions. The ideal situation would be for patients with problems needing specialized management being referred to a higher level health care institution by a primary care institution, while minor illnesses are being managed at the primary institution.

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Curative care Services

Similarly, a large number of pregnant mothers prefer to deliver at bigger medical institutions. This too is a major contributor to the bed occupancy rate of primary care institutions being almost half to one third that of tertiary and secondary care institutions . These underutilized primary care institutions are perfectly capable of providing such basic facilities as antenatal and perinatal care.

Many discussions are underway to upgrade the primary care institutions towards devising a system where the treatment of patients with minor ailments can be supplemented by basic investigations, to improve the quality and timeliness of referrals and to improve the follow-up of back referrals.

The summary of services delivered by these institutions is shown in table 3.1 and the trends of service provision in these hospitals are shown in table 3.2. The details of the above information are given in annexure

Accordingly it is evident that the bed occupancy rate of primary care hospitals are below 50%.





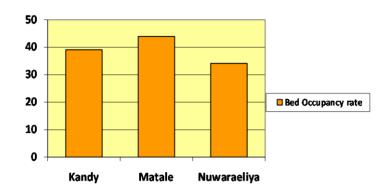
Curative care Services

Table 3.1 – Summary basic information and services delivered by primary care institutions in Central province in 2007

	Kandy	Matale	Nuwara Eliya	Total
No. of Institutions	77	33	44	154
No.of beds	2097	622	1203	3922
No.of wards	181	57	94	332
Bed occupancy rate	39.15	43.95	34.08	38.36
(%)				
No.of Admissions	134575	37060	65758	237393
OPD Attendance	2330812	751997	821859	3904668
Total inpatient days	299666	99773	149647	549086
per year				
No.of clinics held	10012	4010	4811	18833
Clinics Attendance	504035	137048	152490	793573
No.of Deaths	282	95	209	586
No.of Deliveries	2446	714	3971	7131
No.of patients	20002	3671	10342	34015

tuonofound out		
transferred out		

(Fig.3.1) Summary of bed occupancy rate of Primary Care Institutions in 2007



Curative care Services

Table 3.2 – Services provided by primary care institutions in Central Province in 2006 & 2007

		OPD	Indoor	Clinic	Deliveries
		attendance	admissions	attendance	
Kandy	2006	1,853,377	134,110	471,630	2,628
	2007	2,330,812	134,575	504,035	2,446
	% change	25.76	0.35	6.87	-6.9
Matale	2006	544,381	37,720	90,329	777
	2007	751,997	37,060	137,048	714
	% Change	38.14	-1.75	51.72	-8.12
Nuwaraeliya	2006	672,151	79,239	157,961	5,138
	2007	821,859	65,758	152,490	3,971
	% change	22.27	-17.01	-3.46	-22.71

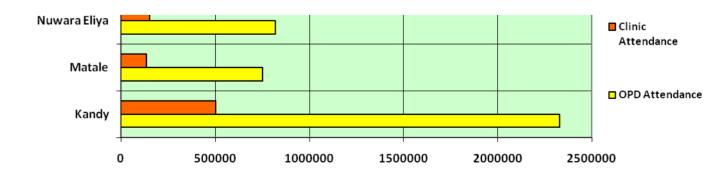
Total	2006	3,069,909	251,069	719,920	8,543
	2007	3,904,668	237,393	793,573	7131
	% change	27.19	-5.45	10.23	-16.53

There was an increase of more than 25% of the OPD attendance in primary care institutions in all 3 districts during 2007. Clinic attendance of Matale district was increased by 50% during 2007 and this was due to a special effort of the management to facilitate a special programme by supporting peripheral institutions with staff, drugs and other facilities. There was a slight increase of clinic attendance in Kandy district and a slight decrease in Nuwaraeliya district. There was no major change of indoor admissions in Kandy and Matale district. However, according to this table, there was a 17% decrease of indoor admissions in Nuwaraeliya district during 2007 compared to previous year. The reason for this change is that Rikillagaskada and Dickoya hospitals were considered as secondary care institutions during 2007 and during 2006 they were considered as primary care institutions. Total number of admissions of these two hospitals was more than 19000 during 2007.

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Curative care Services

(Fig.3.2) Summary of clinic attendance and OPD attendance of Primary Care Institutions in 2007



3.2 Secondary Care services-2007

Five secondary care institutions provide specialized services to the people in the Province. Out of these, three hospitals (**DGH Matale, DGH Nawalapitiya and DBH Dambulla**) come under the Central Provincial Health Department and the other two (DGH Nuwaraeliya and DBH Gampola) are managed by line ministry. Apart from those hospitals, two other hospitals in Nuwara-eliya district (DBH Dickoya, and DBH Rikillagaskada) were also upgraded to base hospital status and will start to provide specialist care during 2007.

Two other hospitals(DH Teldeniya and DH Hettipola) have also been proposed to be upgraded to District Base Hospital status. These hospitals are currently considered as divisional hospitals.

In-ward care provided by secondary care institutions has undergone dramatic change in the last decade as more and more patients seek in-ward care for non-communicable diseases like uncontrolled diabetes mellitus, hypertension which result in a prolonged hospital stay This accounts partly for the high bed occupancy rate in some specialized units in these institutions.

There was an increase in the attendance at specialty clinics in secondary health care institution, probably due to increased awareness and better detection of illnesses.

The summary of the basic information and services provided by these hospitals are shown in table 3.3.

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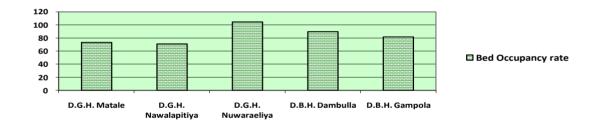
Curative care Services

Table 3.3 - summary of the basic information and services provided by secondary care institutions in Central Province (including line ministry institutions) during 2007

	DGH	DGH	DBH	DGH	DBH
	Matale	Nawalapitiya	Dambulla	Nuwaraeliya	Gampola
No. of wards	21	18	09	12	09
No. of beds	683	468	214	294	311
OPD attendance	295303	209992	132998	141752	215908
Admissions	55083	41724	33419	34956	36708
Bed occupancy rate	73.4%	70.9%	90%	104%	81.2%
Total No.of Inpatient Days	183043	130503	74123	112187	91205
Total No.of Deaths	386	364	166	487	386

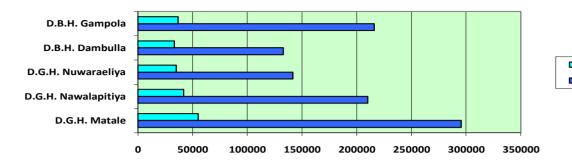
Total No.of Deliveries	5633	4141	3355	5200	3215
Spontaneous Deliveries	3874	3078	2575	4223	2254
Caesarian Sections	1759	1063	780	977	961
Total No of Live Births	5585	4078	3335	5105	3184
Total No of Maternal Deaths	02	04	-	02	-
Total No of Still Births	48	63	20	95	31
Total No of Low Birth Weight	1068	1016	613	1647	634
Babies					
Total No of patient	1157	2006	1551	1352	1698
Transferred out					
Minor operation done	7876	8037	2577	4445	3063
Major operation done	3560	3051	1995	2294	1940
Total No of Clinics Held	2728	1280	1046	2118	1173
Total No of Clinics Attendance	158598	131857	65143	95474	106815

(Fig.3.3) Summary of bed occupancy rate of Secondary Care Institutions in 2007



Curative care Services

(Fig.3.4) Summary of OPD attendance and Inpatients of secondary level institutions in 2007



■ No.of Inpatients ■ NO.of Out patients

3.2.1 – Services provided by Secondary Care institutions under Central Provincial Health Department

Three secondary care institutions are managed by Central Provincial Health Department. A Detailed summary of wards and beds and other services provided by these institutions are given in annexure

Trends of the services provided by these three institutions are given in table 3.4.





DGH-Nawalapitiya –

DGH-Matale



DBH Dambulla

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Curative care Services

Table 3.4 - Trends of the services provided by secondary care institutions under Central Provincial Health Department.

Provincial Health Depai		DGH Matale	DGH Nawalapitiya	DBH Dambulla
No. of wards	2006	21	18	09
	2007	21	18	09
	% change	00%	00%	00%
No. of beds	2006	679	439	196
	2007	683	468	214
	% change	0.6%	6.6%	9.2%
OPD attendance	2006	274180	189756	131672
Of D attendance	2007	295303	209992	132998
	% change	7.7%	10.7%	1%
	75 0.1.0.1.80		20.070	
Admissions	2006	52540	38728	33845
	2007	55083	41724	33419
	% change	4.8%	7.7%	-1.3%
Bed occupancy rate	2006	80.5	81.3	97.5
	2007	73.4	70.9	90.0
	% change	-9.8%	-12.3%	-8.2%
Clinic attendance	2006	111819	135284	48299
	2007	158598	131857	65143
	% change	41.8%	-2.5%	34.9%
Deliveries	2006	5490	4112	2988
Deliveries	2007	5633	4112	3355
	% change	2.6%	0.7%	12.3%
	70 Change	2.070	0.770	12.3/0
Major surgeries	2006	3725	2936	2174
	2007	3560	3051	1995
	% change	-4.4%	3.9%	-8.2%
X rays	2006	41138	32036	16400
	2007	24115	17118	7430
	% change	-41.4%	-46.6%	-54.7%
No. of blood issued	2006	2108	1713	917
140. 01 51000 133000	2007	1952	1857	1157
	% change	-7.4%	8.4%	26.2%
No.of Deaths	2006	161	406	74
	2007	386	364	166
	% change	139.8%	-10.3%	124.3%
N. 6	2005		125	
No.of patients transferred	2006	1325	1331	1389
out	2007	1157	2006	1551
	% change	-12.6%	50.7%	11.7%
	/o change	-12.0%	30.770	11./ 70

Curative care Services

Maternal and child health care services at secondary health care institutions showed a remarkable improvement over the last few years especially in terms of quality of service resulting in a reduction of maternal morbidity, maternal mortality and peri-natal deaths in the province.

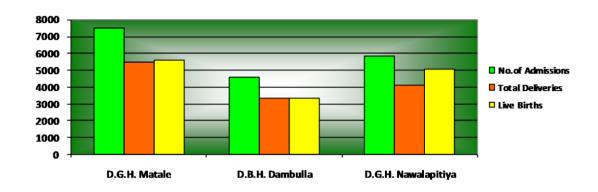
Table 3.5:- Maternity Statistics of secondary care institutions under Central provincial Health department.-2007

	Type of the indicator		Total	
		Nawalapitiya	Matale	Dambulla
No of Admissions		5876	7500	4581
Daily average of m	naternal admissions	16.1	20.5	12.5
	Single delivery	4067	5506	3299
No of deliveries	Twin delivery	37	62	28
	Triplet delivery Total No. births Birth weight >2500g Birth weight <2500g Itage of LBW babies Total No. of Live Births Total No. of Still births The rate (per 1000 Live Births)	-	01	-
	Total No. births	4141	5633	3355
	Birth weight >2500g	3062	4517	2722
	Birth weight <2500g	1016	1068	613
Percentage of LBV	V babies	24.9%	19.1%	18.3%
	Total No.of Live Births	4078	5585	3335
	Total No. of Still births	63	48	20
Still birth rate (pe	r 1000 Live Births)	16.0	8.6	5.9
Normal va	ginal deliveries	3751	3706	2493
Forceps d	eliveries	08	96	02
Breech de	liveries	05	15	-
Vacuum e	xtractions	110	57	80
Lower segment ce	sarean section - L.S.C.S.	1063	1759	780
Caesarian section	rate	25.6%	31.2%	23.2%
Maternal Deaths		04	02	Nil
Maternal death ra	te (per 100,000 Live Births)	101.8	35.8	-
Early neonatal dea	aths	36	32	17
Manual removal p	lacenta	33	79	40
Postpartum hemo	rrhage	14	30	11
			1	1

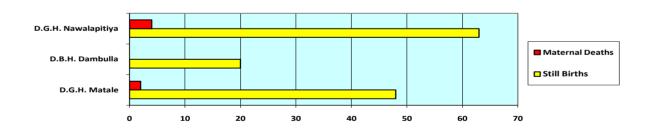
Early neonatal death rate (per 1000 Live Births)	9.2	5.7	5.1
Perinatal Mortality rate (per 1000 Live births)	25.2	14.3	11.0

Curative care Services

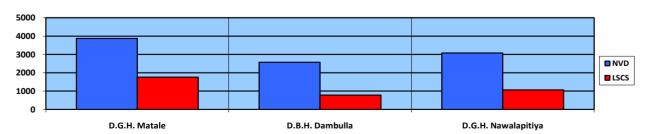
(Fig.3.5) Summary of maternity statistics [Admissions, deliveries and live births] of Secondary Care Institutions in 2007



(Fig.3.6) Summary of Maternity Statistics [Still births, maternal deaths] of Secondary Care Institutions in 2007



(Fig.3.7) Summary of Maternity Statistics [NVD and LCSC performed] of Secondary Care Institutions in 2007



In addition to curative care services, secondary healthcare institutes provide special preventive care activities such as Anti-rabies and Ant-tetanus vaccination. Around 13,000 Anti-rabies vaccines and 7,888 Anti-tetanus vaccines have been issued by three provincially managed secondary care hospitals in 2007.

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Curative care Services

3.2.2 Supportive services for curative care in secondary care institutions:

3.2.2.1 Laboratory Investigations

The facilities required to perform investigations ranging from tests such as urine sugar, blood sugar to the more sophisticated investigations such as renal function tests have been provided. Almost all primary care institutions have minilabs to perform basic investigations.

All secondary care institutes have well equipped laboratories with the services of a Consultant Pathologist. Facilities are present to perform investigations in Biochemistry, Hematology, Biotechnology and Histopathology. Some laboratories use auto analyzers while some operate with manual systems which have been identified to be replaced with auto analyzers in order to improve their quality and overall efficiency.

In 2007, the provincial secondary hospitals had performed nearly 500,000 laboratory tests.



Curative care Services

Table 3.6 -Summary of Laboratory Investigations done in secondary care institutions under Central Provincial Health Department during 2007

Test category	DGH Nawalapitiya	DGH Matale	DBH Dambulla
Biochemistry	37981	68833	17471
Histopathology	424	2711	-
Bacteriology	10413	12665	2798
Hematology	90580	121251	31589
Other	41744	33329	18533
Total	181142	238789	70391
Total No of MLTT	07	13	03
No of test per MLT	25877	18368	23463
per year			

3.2.2.2 Radiology Investigations:

Radiology investigations play a major role in curative care and are available from secondary care hospitals onwards. Provincial secondary care institutions should be able to provide basic radiological investigations including plain X-rays, Barium studies and special procedures like Micturition cystourethrograms (MCUGs). In addition, these hospitals provide ultrasound scanning facilities. It is planned to improve the existing radiology facilities by way of providing modern radiology equipment (eg. X-ray machines with fluoroscopy facilities and CT scans) in the near future.

Table 3.7 - Summary of Radiology investigations done in secondary care institutions under Central Provincial Health Department during 2007

	Total	
DGH Nawalapitiya	DGH Matale	DBH Dambulla

No of OPD & clinic cases	2628	4995	1764
No of Ward Cases	14275	13779	5170
No. of other Investigations	215	346	149
Total	17118	19120	7083
No of Radiographers	02	04	01
No. of tests per Radiographer per	8559	4780	7083
year			

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3.2.2.3. E.C.G. services 2007

ECG facilities are available in all secondary care institutes.

Table 3.8 - Summary of ECG recordings done in secondary care institutions under Central Provincial Health Department during 2007

	Total				
	DGH	DGH DGH Matale DBH			
	Nawalapitiya				
OPD	1690	1255	635		
Clinics	1115	1165	618		
Wards	10006	20163	12396		
Total	12811	22583	13649		
No. of ECG recordists	02	03	02		
No. of ECG per recordist per year	6405	7527	6824		

3.2.2.4 Blood bank services:

In any institution which provides complete maternal services and operative services, a well established blood bank is a mandatory. At present, all provincial secondary care institutions have blood banks administered by the Central Blood Bank. The problem of the patient having to find donors prior to surgery or delivery was solved with the establishment of Blood banks. Now the Blood bank has taken over this function by finding volunteer blood donors and maintaining a sufficient reserve of blood.

Table 3.9 - Blood bank statistics of secondary care institutions under Central Provincial Health Department-2007

	DGH	DGH	DBH
	Matale	Nawalapitiya	Dambulla
.No. of donors donated blood	1710	1992	1179
No. of blood pints taken from other Blood	1473	422	342
banks			
.No. of blood pints issued	1952	1857	1157
No. of blood pints discarded	231	433	454
Wastage	7.6%	20.8%	23.9%

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3.2.2.5 Physiotherapy services:

The Physiotherapy units at the DGH Nawalapitiya, DGH Matale and DBH Dambulla provide outpatient as well as inpatient services. These units have a well trained physiotherapist and other required staff and are equipped to provide the appropriate therapy depending on the needs of the patient.

Details of the services provided are given in the table below:

Table 3.10 - Summary of Physiotherapy services done in secondary care institutions under Central Provincial Health Department during 2007

	Total			
	Nawalapitiya	Matale	Dambulla	
No of new patients treated	720	2600	147	
No of revisited patients treated	2760	20764	190	
No. of Physiotherapists	1	2	1	
Total No of patients treated	3480	23364	337	
Patients per Physiotherapist per	3480	11682	-	
year				

^{*}Physiotherapist for DBH Dambulla was appointed in August 2007

3.2.2.6 Special clinics:

Details of the specialized clinic conducted by the various specialties are as follows-

Table 3.11 - Summary of special clinics done in secondary care institutions under Central Provincial Health Department during 2007

Specialty	Total Visits			
	Nawalapitiya	Matale	Dambulla	
Medical	40038	46289	21953	
Surgical	13754	12338	4527	
Gynecology and Family Planning	4437	3978	2650	
Obstetric	11925	6735	3529	
E.N.T	3341	5626	855	
Еуе	11113	11263	4798	
Pediatric	12896	10171	5727	
Psychiatric	3990	13384	3288	
Dental and Maxillofacial (OMF)	-	24019	-	
Dental (OPD)	9802	19587	10972	

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3.2.2.7 Surgeries-2007

All three hospitals perform major and minor surgeries under guidance of surgeons specialized on different entities. Surgeries done during 2007 relating to the various specialties are given below.

Table 3.12 - Summary of surgeries done in secondary care institutions under Central Provincial Health Department during 2007

Specialty	DGH Nawalapitiya			DGH Matale			DB	H Dambu	lla
	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total
General Surgery	574	5137	5711	1278	4745	6023	514	1578	2092
Obstetric	1067		1067	1688	294	1982	780		780
Gynecology	283	1016	1299	293	1499	1792	177	815	992
EYE	-	-		640	51	691	524	184	708
Dental and Maxillofacial	-	-		40	323	363	-	-	-
E.N.T.	-	33	33	122	463	585	-	-	-
Others	-	731	731	-	-	-	-	-	-
Total	1924	6917	8841	4061	7375	11436	1995	2577	4572

3.2.2.8 Premature Baby Unit (PBU)

The DGH Nawalapitiya, DGH Matale and DBH Dambulla have facilities to care for premature babies. The Premature Baby Units have a staff working around the clock 24 hours and are equipped with ventilators, incubators and other necessary equipments.

Table 3.13 - Summary statistics of Premature Baby Units in secondary care institutions under Central Provincial Health Department during 2007

		DGH	DGH Matale	DBH Dambulla
		Nawalapitiya		
1	Admissions	740	831	597
2	Maturity			DNA
	< 28 weeks	4	10	
	28-36 weeks	48	167	
	> 36 weeks	657	616	
3	Weight			DNA
	< 1000gr.	10	08	
	1000 - 1490 gr	69	38	
	1500 – 2490 gr.	295	333	
	>2500gr.	277	455	
4	Reason for admission			DNA
	Birth Asphyxia	11	46	
	Meconium Aspiration	68	40	
	Pre Term	49	160	
	IUGR	73	73	
	Grunting	25	24	
	Poor Sucking/lethargy	77	15	
	Gestational DM	12	35	
	Congen. Abnormality	15	138	
	Other	350	313	
5	*Total Number of NND	36	36	19
6	*Number of early NND			17
	(Deaths within the first 7 days	36	30	
	of life)			
7	Cause of Death			
	Prematurity	9	10	6
	Birth Asphyxia +Septicemia	14	5	4
	Congen. Abnormality	5	7	1
	Other	8	14	8
8	Number Discharged	712	761	579
9	Number Transferred out	35	34	32

Includes Deaths of Transferred Out babies
NND-Neonatal Deaths

3.2.2.9 ICU care:

Out of the 3 secondary care institutions belonging to the Provincial Health Department, DGH Matale and DGH Nawalapitiya have Intensive care facilities at present. A new ICU is being established for DBH Dambulla and will start functioning in the near future.

Table 3.14 - Summary of ICU statistics in secondary care institutions under Central Provincial Health Department during 2007

	DGH Matale	DGH Nawalapitiya
No. of ICU beds	07	04
ICU admissions	288	336
ICU deaths	41	83
ICU death rate	14.2%	24.7%

3.2.2.10. Hospital deaths-2007

The number of hospital deaths which took place at DGH Nawalapitiya, DGH Matale and DBH Dambulla are given below:

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Table 3.15 - Summary of statistics of hospital deaths occurred in secondary care institutions under Central Provincial Health Department during 2007

	DGH	DGH Matale	DBH
	Nawalapitiya		Dambulla
Inpatients deaths	364	386	166
No of Deaths on admission (OPD	02	120	66
Deaths)			
Deaths within 48 hours of admission	305	191	127
Still births	63	48	20
Infant deaths	36	32	19
Maternal deaths	04	02	-

It is clearly evident that the more than 50% of the hospital deaths in these institutions occurred within 48 hours of admission and it emphasized the importance of improving emergency and intensive care in these hospitals as well as in other primary care hospitals.

3.3 - Tertiary care services -2007

In he Central Province there are two tertiary care institutions (TH Kandy and TH Peradeniya) providing specialized tertiary care services to the people in the Province. Both these institutions are managed by the line ministry. The bed strength and the services provided by those two institutions during 2007 are given in table 3.16.

Table 3.16. - The bed strength and the services provided by tertiary care institutions in Central province during 2007

	TH Kandy	TH Peradeniya	SBCH Peradeniya
No. of wards	78	21	3
No. of beds	2251	835	112
OPD attendance	328295	247147	74447
Admissions	166648	60980	5590
Bed occupancy rate	82%	88%	18%
Total No.of Inpatient Days	664690	268789	21036
Total No.of Deaths	3014	881	11
Deliveries			0
Spontaneous Deliveries	7915	7538	
Caesarian Sections	3551	3182	
Total No of Live Births	11661	7720	0
Total No of Maternal Deaths	17	00	0
Total No of Still Births	175	94	0
Total No of Low Birth Weight	2312	197	0
Babies			
Total No of patient		1577	85
Transferred out			
Total No of patient	27651	6998	112
Transferred in			
Minor operation done	28948	87970	434
Major operation done	22241	8157	15
Total No of Clinics Held	7962	4087	5
Total No of Clinics		316869	14133
Attendance			

3.4 Upgrading Dickoya and Rikillagaskada Hospitals.

In 2006 it was proposed to upgrade DH Rikillagaskada and DH Dickoya to the level of Base Hospital considering their locations and service need. .

3.4.1 DBH Rikillagaskada:

This hospital caters to a population of 130450— and the nearest hospital delivering secondary care services is Kandy General Hospital which is -60-km away. Therefore the need for a secondary healthcare institute in this area was identified.

After the decision to upgrade this hospital a Labour room, an ante natal ward and residential facilities for doctors were constructed. During 2007 an acting Physician was appointed to the hospital. However there was no continuous specialist care available to this hospital. So, there was no major improvement in the services of this hospital during 2007. That is evident when comparing the data for the years 2006 and 2007.

Table 3.17 Basic data on DBH Rikillagaskada

	Rikillagaskada				
	2006	2007			
No of Beds	116	106			
No of Wards	05	05			
Bed Occupancy Rate (%)	77.91	57.93			
Admissions	10,949	11825			
OPD Attendance	70,639	79141			
Total Inpatient days per year	32,988	22412			
No of clinic held	202	196			
Clinic Attendance	18,197	30305			
Total no of deaths	41	22			
Total no of deliveries	414	398			
Total no of Patient Transferred from the institution	2391	2432			

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New Maternity Ward -DBH Rikillagaskada



District Base Hospital Dickoya

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3.4.2 DBH Dickoya:

DBH Dickoya belongs to the Nuwara Eliya District and caters to a population of 207500-which includes the estate population. The nearest secondary care hospital is DBH Nawalapitiya which is 40 km away. During the process of upgrading various changes to the infrastructure were made:

Table 3.18 Basic data on DBH Dickoya:

	Dickoya		
	2006	2007	
No of Beds	73	88	

No of Wards	07	07
Bed Occupancy Rate (%)	54.79	86.73
Admissions	4866	7200
OPD Attendance	27,008	39887
Total Inpatient days per year	14,598	27858
No of clinics held	211	460
Clinic Attendance	11694	18173
Total no of deaths	48	36
Total no of deliveries	699	948
Total no of Patient Transferred from the institution	645	547

Laboratory and Radiology facilities will be made available at this hospital in the near future. A Comprehensive Eye Care Unit is also proposed to be constructed at Dickoya.

At present there is a Consultant Physician and a Consultant Obstetrics & Gynaecologist at Dickoya and continuous specialist services were available for this hospital during 2007. The improvement of OPD attendance, bed occupancy rate and number of deliveries during 2007 shows the impact of specialized services of the hospital.

During 2007 these two hospitals commenced delivery of some secondary healthcare services.

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Morbidity and Mortality

4 Morbidity and Mortality

Even though Sri Lanka has a good field surveillance system for communicable diseases, there is no proper field data collection method for other diseases such as non communicable diseases. However, morbidity data is available for the patients taking treatment as inpatients from government hospitals. The data on outpatient attendance is not routinely collected except for the special surveys. Apart from these, both inpatient and outpatient data on patients seeking treatment from private institutions are also not

available. In government health system, indoor morbidity and mortality register (IMMR) has become the major source of information on these aspects.

4.1 – Inpatient mortality and morbidity

As described earlier, information on inpatient morbidity and mortality of government health institutions are gathered through IMMR. The summary of provincial and district data on leading causes of hospitalizations and hospital deaths (including line ministry institutions) during year 2006 are shown in tables 4.1 and 4.2. The details of leading causes of hospitalizations and hospital deaths (including line ministry institutions) during year 2006 of three districts of Central province are given in annexure. These data are available only for the year 2006 at the moment.

Table 4.1 Leading causes of live discharges (including line ministry institutions) for the year 2006 in Central province and Kandy, Matale and Nuwaraeliya districts

Disease code (IMMR	Disease and ICD code	Central Province		Kandy		Matale		Nuwaraeliya	
code)		No.	Rank	No.	Rank	No.	Rank	No.	Rank
195	Single spontaneous delivery (O80)	35,474	1	21,258	2	6,447	1	7,769	1
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	28,628	2	20,002	3	5095	3	3531	3
243	Persons encountering health services for examination, investigation and for specific procedures of health care (Z00-Z13,Z40-Z54)	28,010	3	24,068	1	3,094	8	-	-
245	Undiagnosed / Uncoded	26,924	4	18,123	4	2,856	12	5,945	2
150	Asthma (J45-J46)	22,037	5	14,510	5	4,789	4	2,738	6
227	Open wounds and injuries to blood vessels (S01,S11,S15,S21,S25,S31,S35,S41,S45, S51, S55,S61,S65,S71,S75,S81,S85,S91,S95,T01,T0 6.3,T09.1,T11.1,T11.4,T13.1, T13.4, T14.1, T14.5)	19,885	6	10,987	8	5,884	2	3,014	5
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	19,137	7	13,280	6	3,329	6	2,528	8
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0,T14.0)	17,512	8	9,972	10	4,274	5	3,266	4
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	15,913	9	10,177	9	3,025	10	2,711	7
217	Other signs and symptoms and abnormal clinical findings (R25-R49,R52,R53,R55,R57-R69)	14,796	10	12,650	7	-	-	-	-
156	Gastritis and duodenitis (K29)	13,776	11	-		3,295	7	2,388	9

125	Essential hypertension (I10)	13,310	12	9052	11	-	-	1,702	10
230	Other injuries of specified, unspecified and multiple body regions (S09,S16,S19,S29,S39,S46,S49,S56,S59,S66,S69,S76,S79,86,S89,S96,S99,T06.0,T06.1,T06.4-T06.8,T07,T09.3-T09.5,T09.8,T09.9,T11.5,T11.8,T11.9,T13.5,T13.8,T13.9,T14.6,T14.8,T14.9)	12,750	13	8,523	12	2,631	14	1596	12
115	Cataract and other disorders of lens (H25-H27)	11,282	14	8,449	13			-	-
211	Symptoms and signs involving the digestive system and abdomen (R10-R19)	11,281	15	-	-	2,605	15	-	-

Source – Medical statistical unit, Colombo

Table 4.2 Leading causes of hospital deaths (including line ministry institutions) for the year 2006 in Central province and Kandy, Matale and Nuwaraeliya districts

Disease code	Disease and ICD code	Central	Province	Kandy		Matale		Nuwaraeliya	
(IMMR code)		No.	Rank	No.	Rank	No.	Rank	No.	Rank
245	Undiagnosed / Uncoded	477	1	466	1	-	-	-	-
134	Cerebrovascular disease (I60-I69)	404	2	317	2	47	3	40	2
128	Acute myocardial infarction (I21,I22)	325	3	233	4	49	1	43	1
219	Ill-defined and unknown causes of mortality (R95-R99)	245	4	235	3	-	-	-	-
129	Other ischaemic heart disease (120,123-125)	207	5	161	5	29	7	-	-
132	Heart failure (I50)	207	6	123	8	48	2	36	4
149	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40-J44)	183	7	124	7	45	5	14	12
133	Other heart diseases (I27.0-I27.8, I28-I49,I51)	168	8	89	10	46	4	33	5
145	Pneumonia (J12-J18)	157	9	116	9	25	8	16	11
177	Renal failure (N17-N19)	155	10	134	6	10	14	11	16
199	Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth	117	11	80	12	-	-	30	6

	weight (P05-P07)								
235	Toxic effects of organophosphate and carbamate insecticides (T60.0)	115	12	61	13	17	12	37	3
022	Septicaemia (A40,A41)	113	13	85	11	19	11	-	-
150	Asthma (J45-J46)	101	14	-	-	22	10	27	7
125	Essential hypertension (I10)	88	15	56	15	23	9	-	-

Source – Medical statistical unit, Colombo

According to table 4.1, it is evident that viral fevers ranked as no 2 in hospital morbidity. There is also a clear evident that undiagnosed / uncoded live discharges ranked in the top list of hospital inpatient morbidity in Central province. It emphasizes the need of increasing awareness among medical officers on proper diagnoses writing. Apart from that the no 1 rank of hospital deaths is also shown as undiagnosed/ uncoded deaths and Kandy district mostly contributed to it. As also evident in national figures, acute myocardial infarctions and cerebrovascular diseases have ranked in the top list of the hospital mortality in this province.

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5. Preventive Health

5.1. Maternal and Child Health

This chapter contains information on family health activities conducted by public health staff in the field and at clinics conducted both in the field and divisional hospitals.

Table 5.1 Population statistics, type of clinics and estimates for 2007

	2006	2007
Population	2,526,901	2,562,277
Estimated eligible families	379,035	409630
Estimated number of births	48,516	50370
Estimated infant deaths	703	730
Estimated maternal deaths	18	21
Number of ante natal clinics	147	186
(single+combined) clinics		
Number of child welfare clinics	153	102
(single+combined)		
Number of poly clinic	406	443
Number of field weighing posts	3754	3724
Number of FP clinics	271	278

In 2007 maternal and child health services had been provided through 186 antenatal clinics, 120 child welfare clinics and 443 poly clinics.





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Table. 5.2 Antenatal Care Services Provided in the Central Province

Indicator	2006		2007	
	Number	percentage	Number	percentage
Eligible families under care	410,609	108.3	413814	101.0
Pregnant mothers registered by PHMM	49,921	102	51788	102.8
Pregnant mothers registered at home before 12 weeks POA	39,056	86.0	47195	91.1
Pregnant mothers under care	26,849	107.6	26884	103.8
Primi under care/ registered	9,104	33.9	18875	36.4
Pregnant mothers tested for VDRL at delivery	19,626	73.1	40300	98.0
Pregnant mothers grouping done at delivery	21,592	80.4	40856	99.3
Pregnant mothers protected with Rubella	24,357	90.7	49528	95.6
Teenage pregnancies under care	1,657	6.2	3267	6.3
Pregnant mothers with BMI < 18.5 kg/m²	9,951	23.0	11225	21.7
Pregnant mothers with BMI > 25.0 kg/m ²	4,790	11.1	6230	12.0

The reported data in 2007 indicate that 100% of the eligible families were under the care of the Public Health Midwives. Public health midwives have registered 51,788 pregnant mothers during 2007 which is 102% of the estimated figure. Of the mothers registered 91.1% were registered before 12 weeks of pregnancy, which is higher than the reported figure in 2006. The registration of pregnant mothers before 8 weeks show that 50.6% are registered very early and shows that both the both Public Health Midwives and also families are aware of the importance of registering pregnancies early. Of the pregnant mothers under care 6.3% were teenage mothers while 36.4% were primi gravida. Service indicators such as VDRL coverage, Blood Grouping & Rh and Rubella were reported as 98.0%, 99.3% and 95.6% respectively. The nutrition status of pregnant mothers showed a slight improvement from 2006 where 21.7% did not have adequate Body Mass Index (BMI < 18.5 kg/m²). The nutrition status of adolescents and also pre pregnancy women should be targeted as a key intervention to improve nutrition of women before pregnancy.

Table 5.3. Delivery and outcome of care provided

Indicator	2006		2007		
	Number	percentage	Number	Percentage	
Deliveries reported by PHM (hospital and field)	39,222	79.8	41,139	81.7	
Home deliveries	207	0.5	219	0.5	
Home deliveries receiving untrained assistance	117	56.5	116	53.0	
Live births reported	39,355	80.1	41,081	81.6	
Multiple births	462	1.2	608	1.5	
Still Births reported	413	* 10.5	442	*10.8	
Abortions reported	2,391	* 60.8	3065	*74.6	
Low birth weight	5,429	14.0	6339	15.7	

^{*} per 1000 LB

PHMM reported a total number of 41,139 deliveries during 2007 which is 81.7% of the estimated number 50,370. The numbers of home deliveries have slightly increased from 207 in 2006 to 219 in 2007. Further efforts should be made to discourage all home deliveries while investigating the causes for home deliveries in the Central Province to take preventive measures. Of the single live births 15.7% were low birth weight (LBW, birth weight less than 2500gr). The LBW reported from hospitals in the CP was 19.8 which means that the reporting is still low. All efforts need to be made to make sure that infant registration and post partum visits are done to compile accurate data on the new born. The still birth ratio reported for Central Province was 10.8 per 1000LB. 3065 abortions were reported from the Central Province, which gives an abortion ratio of 74.6 per 1000 LB.

Table. 5.4 Post partum care provided by the Public health midwives

Indicator	20	006	2007		
	Number	percentage	Number	Percentage	
At least 1 visit during first 10 days (of reported deliveries)	35,097	89.5	36642	89.1	
At least 1 visit during first 10 days (of estimated deliveries)	35,097	71.4	36642	72.7	
Post natal care around 42 day	27,005	68.9	30701	74.6	
Mothers with complications	2,210	5.6	DNA		

In 2007 the number of post partum visits were conducted for 89.1% of the reported deliveries during the first 10 days. The over all post partum coverage is only 72.7% which still shows that adequate attention is not given by health managers for post partum care. The post natal care reported around the 42nd days has slightly increased to 74.6%. The reporting of mothers with complications has increased during 2007 as compared to 2006.

Table. 5.5 Post partum maternal morbidity

Indicator	2006		2007		
	Number	percentage	Number	Percentage	
Fever	482	20.1	533	13.3	
Offensive discharge	279	11.6	282	7.1	
Excessive bleeding	155	6.5	264	6.6	
Dysuria	247	10.3	189	4.7	
Infected Episiotomy	577	24.0	546	13.7	
Separated Episiotomy	DNA		443	11.1	
Foreign material in vagina	DNA		68	1.7	
Infected caesarian section	DNA		392	9.8	

Deep vein thrombosis	DNA		27	0.7
Post partum psychosis	DNA		69	1.7
Engorged Breast	DNA		800	20.0
Breast abscess	DNA		123	3.1
Cracked nipple	DNA		238	6.0
Heart failure	DNA		21	0.5
Other	661	27.5	-	-
Total	2,401	100.0	3,995	100.0

Table. 5.6 Infant care provided by Public Health Midwives.

Indicator	2006		2007	,
	Number	percentage	Number	Percentage
Infants registered by PHMM	40,720	83.9	43606	86.6
Infant deaths reported by PHMM	407	*10.3	472	*11.5
Infant deaths investigated by PH staff	317	77.9	450	95.3
Neonatal Deaths reported	310	*7.9	376	*9.2
Post neonatal deaths reported	97	*2.5	92	*2.2
Perinatal deaths reported	647	*16.4	727	*17.7
Child deaths reported	74	**0.38	68	**0.39
Still Birth	413	* 10.5	442	*10.8

The data show that in 2007 PHMM have registered 86.6% of the estimated infants for routine care as compared to 83.9% in 2006. Out of the 730 estimated infant deaths only 472 (64.7%) has been reported. Out of the infant deaths reported 95.3% has been investigated which shows a marked improvement from 2006. 79.7% of the infant deaths are reported to have occurred during the neonatal period. The Perinatal Mortality Rate reported from the field is 17.7 per 1000LB. This shows that more attention needs to be paid by PHMM for infant care in the field.

On average 75.6% infants have been weighed monthly at 563 clinics and 3724 field weighing centers. Out of the infants weighed 10.6% were under weight (<-2Sd). The weighing of infants show a decline in 2007 as compared to 2006.

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Table. 5.7 Growth Weighing of Children under 5 years by Public Heath Midwives.

Indicator		2006 2007				
indicator	4	2006	2007			
	Number	percentage	Number	percentage		
Average number of infants weighed monthly	37,411	85.3	33,031	75.6		
Infants weighing below – 2Sd	2,574	6.9	3507	10.6		
Infants weighed below – 3Sd	DNA		578	1.7		
Quarterly average of children 1-3 yrs weighed / *monthly average children weighed 1-2 yrs	162,907	93.3	*445910	72.8		
Quarterly average of children 4-5 yrs weighed/ * number of times children weighed 2-5yrs	138,452	79.3	*733148	+5.9		
Number of children 1-5 yrs weighed who weighed below – 2Sd	61704	20.5	268746	22.8		
Number of children 1-5 yrs who weighed below – 3Sd	DNA		82298	7.0		
Number of children 1-5 yrs weighed who were over weight	DNA		14453	1.2		

⁺ Average number of times children weighed 2-5 yrs

The guidelines for weighing of children was changed in 2007, where children 1-2yrs who were weighed once in 3 months earlier were encouraged to be weighed monthly. The New WHO growth charts for girls and boys were included in the new Child Health Development Record (CHDR)which made it possible to identify children moderately underweight (below – 2Sd), severe under weight (below -3Sd) and also children over weight. Comparison of data

between 2006 and 2007 should be interpreted with caution as two different cut off values are used in the charts.

Data on Children 2-5yrs weighed, should be interpreted with caution as the reporting system gets only the number of times children are weighed monthly, hence the calculation is based on an assumption that children are weighed only once in three months. The average number of times children 2-5 yrs weighed is 5.9 times which means that most children are weighed more than the required number of times. With the present health information system it is not possible to identify the percentage of infants who are weighed at least 9 times during their

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first years nor able to identity the percentage of children who are not weighed regularly. The underweight reported in the Nuwara Eliya is much lower than the other two Districts despite all national surveys including the recent DHS 2006 showing a high percentage of underweight in the Nuwara Eliya District. Under reporting and incorrect recording needs to addressed as a priority for 2008. The weighing needs to be increased to make any meaningful interpretation on underweight for these age groups. The knowledge and practices on infant young child feeding need to be strengthened if the key challenge on child nutrition is to be addressed.

Maternal Deaths:

Pregnancy and childbirth are special events in women's life and in the lives of their families. Although pregnancy is not a disease but a normal physiological process, it is not free of risk to the health and survival of the mother as well as the unborn child. Any maternal death is a tragedy and also a social injustice for individual women, their families and their communities. Most maternal deaths are avoidable, and are therefore unacceptable. It has also been estimated that for every woman who dies, 30 – 40 women suffer from life long disability causing them suffer for the rest of their lives.

Sri Lanka is unique among countries in the South Asia region in that the maternal mortality has been reduced to a low level of around 40 per 100,000 live births. Despite the low national MMR figure a wide District variation exist. With such low figures of MMR all efforts need to be taken to prevent every death, if we are to reduce the MMR even further.

The leading causes of 164 maternal deaths in Sri Lanka for the year 2005 were: Direct maternal Deaths 69.5% (n= 114) and Indirect maternal deaths 27.4% (n=45) while 3.1% (n=5) classified as inconclusive. Out of the Direct deaths, Post partum Haemorrhage (30.7%), Hypertensive disorders (14.9%), Unsafe abortion (13.9%) were reported as leading causes while out of the Indirect deaths 55.6% were due cardio vascular diseases.

During 2007, 44 maternal deaths were reported by the health staff of which 21 deaths were confirmed and 5 deaths were classified as inconclusive despite all investigations being done both at the District and national Maternal Mortality Reviews. Based on the national reviews the Provincial MMR of 52.2 per 100,000LB has been calculated. The District MMR for the Districts of Matale reported much lower MMR as compared to the national MMR but Nuwara Eliya District despite the reduction still report an MMR twice the national ratio.

65.4% (n=17) of the maternal deaths reported were classified as Direct maternal Deaths while 04 (15.4%). Post Partum haemorrhage and Embolism were the leading cause of deaths reported. All efforts should be taken to minimize the preventable deaths in the Central Province. There were 6 antenatal suicide deaths reported in 2007 which needs to be further investigated and early action taken to minimize such deaths.

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Table: 5.8 Maternal Deaths according to classification

	Kandy	Matale	Nuwara Eliya	Total
Maternal Deaths notified	19	05	20	44
Direct Maternal Deaths	07	01	09	17
Indirect Maternal Deaths	02	Nil	02	04
Late maternal deaths	02	01	02	05
Inconclusive	02	02	01	05
Estimated Number Births*	26273	9188	14262	49723
MMR (100,000 LB)	41.9	32.6	84.1	52.2

^{*} Estimated Births calculated using Provincial CBR 19.5 per 1000LB

Fig. 5.1 Trends of Maternal Mortality Ratio by District of Central Province 2002-2007

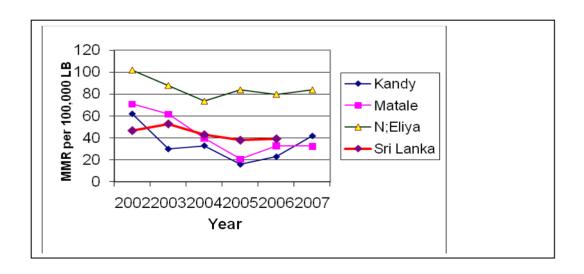


Fig -: 5.2 Maternal Mortality Statistics



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5.2. School Health

The concept of "Kandurata Suwa Kekulu" Health promoting school continues to be advocated at Provincial and Zonal level and is done in partnership with the Ministry of Education. At present majority of school in the Central Province adhere to health promoting school concept in various degrees. Provincial Health and Education departments work together to strengthen this Concept and Several review meeting Were held with officials from both Departments. In May 2007 a special review meeting chaired by the Chief Minister Central Province was held to review the program. The number of schools with school health clubs and the number of schools identified as health promoting has increased in 2007 after the review. A national circular from the Ministry of Education was circulated in October 2007 giving national guidelines on Health Promoting schools. The identification of a marking scheme under 23 areas has been circulated and an award scheme as Gold, Silver and Bronze certificates have been identified. This will hopefully pave way to give credit to those schools who achieve an aggregate of over 60 marks in 2008.

School Health includes the areas of Healthy school environment, School medical inspection and follow up, prevention of communicable diseases, Nutritional services, First aid and emergency care, mental health, dental health, eye health, health promotion and use of school health records.

School medical services include medical inspection of children, detection of and correction of health problems, providing immunization, worm treatment, provision of micronutrients to needy children and advice on health issues. The public Health inspectors conduct an annual sanitation survey in the schools in their respective areas. In 2007 sanitation survey has been completed in 1342 (90.2%) schools which is higher than the coverage in 2006.

The number of schools where there are adequate water and sanitation facilities were reported as 810 (60.4%) and 747 (55.7%) respectively. The SMI coverage in the Central Province increased from 79.6% in 2006 to 96.6% in 2007. This high coverage was achieved due to the close monitoring of school Health at Provincial and District level and also the

commitment of the MOH and their staff. The same high coverage with improved quality of care should be strengthened in 2008. Out of the children examined the commonest health problems identified were dental caries, malocclusion, visual defects and heart diseases.

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Table. 5.9 School Health Activities in the Central Province.

Indicator		2006		2007
	Number	percentage	Number	percentage
Total Number of schools	1,457	-	1488	
Total number of schools sanitation survey completed	1,029	70.6	1342	90.2
Total number of schools with adequate drinking water facilities	775	75.3	810	60.4
Total number of schools with adequate sanitation facilities	715	69.5	747	55.7
Total number of schools SMI completed	1,160	79.6	1433	96.6
Number of children enrolled in year 1,4,7				
Number of children examined in year 1,4,7	116,626	-	103372	
Stunted	5,480	4.7	9176	8.9
Wasted	12,447	10.7	16983	16.4
Over weight	1,180	1.0	1052	1.0
Total number of defects identified during SMI	57,215	-	67622	

Total number of defects corrected	23,542	41.1	28137	41.6
Number of children referred	3,358	2.9		-
No. school health clubs functioning	179	12.3	294	22.6
Number of Health promoting schools	159	10.9	408	28.7

5.3. Well Woman clinic services

The concept of well woman clinics was introduced in 1996 to screen women for reproductive organ malignancies as part of the reproductive health programme. Ten years after initiation not only in the Central Province but also at national level the progress of programme has been extremely slow. In the Central Province the number of WWCS increased to 68 by the end of 2007. The performance reported at WWCs during 2007 is given in the table below.

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Table. 5.10 Performance in well woman clinics in the Central Province.

Table. 5.10 Performance in wen woman clinics in the Central Province.						
Indicator	2	2006		2007		
	Number	Percentage/ incidence*	Number	Percentage/ incidence*		
Total clinic sessions held	829		1184			
First visits to clinic age under 35 yrs	4,251	43.3	2260	16.4		
First visits to clinic age 35 yrs	5,166	52.6	2882	21.0		
First visits to clinic age over 35 yrs	410	4.2	8597	62.6		
No. of women subjected to breast examination	9,684	98.5	14006	96.0		
Breast abnormalities detected	182	*1.9	345	*2.5		
Number of women subjected to cervical visualization	8,195	83.4	12893	88.4		
Number Pap smear taken	7,646	77.8	10899	74.7		
Number reports received	4,509	59.0	5997	55.0		

Cervical smears reported as CIN positive			56	*0.5
Diabetes mellitus detected	158	*1.6	248	*1.8
Hypertension detected	482	*4.9	768	*5.5

^{*} Incidence per 100 women examined

The above data show a gradual increase in the number of clinics conducted but the take up of these services are extremely low. Every effort should be taken in 2008 to make sure that at least one cohort of women aged 35 years are all examined in the WWCs through active out reach services.

5.4. Family Planning

During 2007 a total of 28,124 new acceptors were recruited which is slightly higher than the new acceptors recorded in 2005 and 2006. Temporary methods accounted for 97.5% while the balance were permanent method. The distribution and pattern of new acceptors are given in the table below.

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Table. 5.11 Family Planning new acceptors

	New acceptors for IUCD	New acceptors for injectables	New acceptors for oral pills	New acceptors for Tubectomy	Total New acceptors
2005	4,825	16,873	5,754	184	27,636
2006	5,169	15,973	5,634	697	27,473
2007	7,774	13,647	5,841	702	28,124

Of the eligible families under care 247,496 were reported to be using a modern family planning method thus computing a current user rate of 59.8% in 2007. The percentage of families practicing traditional Family Planning methods was 6.8%. The percentage of families with unmet need of family planning and sub fertile were reported as 7.6% and 1.6% respectively.

5.5. Epidemiological surveillance

Surveillance of notifiable diseases is a major routine activity carried out through the public health system, where all Medical Officers of Health send the weekly return on communicable diseases. 93.5% of the weekly returns were received by the Epidemiology unit in 2007. Out of the returns sent 18.5% were nil returns. It is important that all MOHs should ensure that the weekly return is sent on time while also visiting each of the hospitals in the area and all private practitioners to assist in increasing notifications. The number of cases notified in 2007 for selected notifiable diseases in the CP is given below. Out of the notifications majority of the cases reported were Dengue, Leptospyrosis and water bourne diseases. This reflects that a strategic approach is required to control dengue, leptospyrosis and water borne diseases in the Central Province, while also strengthening the notification system.

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Table. 5.12 Selected notifiable diseases reported in the Central Province

rabie: 5.12 beleated							
	20	05	2006		2	2007	
	Number	Incidence per 100,000 pop	Number	Incidence per 100,000 pop	Number	Incidence per 100,000 pop	
Dengue fever/DHF	585	23.8	1,906	75.4	577	22.6	
Dysentery	1,306	53.1	1,143	45.2	805	31.6	
Encephalitis	07	0.3	16	0.6	14	0.5	
Enteric Fever	375	15.2	326	12.9	228	8.9	
Food Poisoning	358	14.5	75	3.0	398	15.6	
Leptospirosis	120	4.9	141	5.6	336	13.2	
Typhus Fever	106	4.3	148	5.9	130	5.1	

Viral Hepatitis	151	6.1	446	17.7	2677	104.9

Quarterly report on environmental Health reported that 95.0% of the notification were investigated by PHII and 74.4% confirmed . 413 number of cases notified could not be traced due to inadequate details in the address or wrong address. This needs to be addressed as a key area in 2008.

5.5.1 Surveillance of Dengue Fever/Dengue Hemorrhagic fever

Dengue fever is endemic in the Central Province and epidemics have been occurring with increased magnitudes periodically since 2002. The worst epidemic was reported in 2004 with 15467 suspected cases and 88 deaths reported in Sri Lanka, while the figure in the CP was 2697 and 10 respectively. The incidence rate and Case fatality rate for the CP is given in the table below. The seasonal increase in the incidence which occurs in relation to the monsoon rains is given below.

Table. 5.13 Deaths due to DH/DHF From 1999-2007 in Central Province

Year	No. of cases	No. of Deaths	CFR%
1999	53	0	0
2000	328	2	0.60
2001	716	4	0.55
2002	950	8	0.84
2003	730	4	0.54
2004	2697	10	0.37
2005	585	3	0.51
2006	1906	9	0.47
2007	565	3	0.53

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Fig. 5.3 Dengue Cases in Central Province 1999-2007

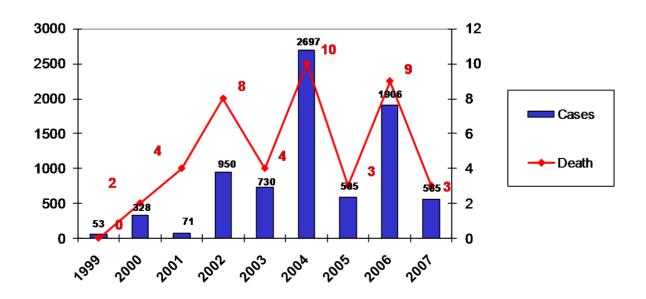
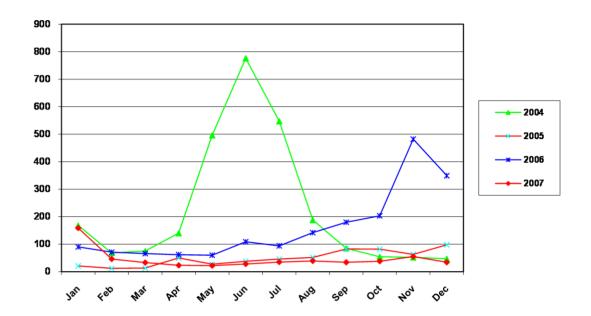


Fig. 5.4 Distribution of Dengue cases by Month in Central Province 2004 – 2007



The MOH divisions which reports a high case load are Kandy Municipal Council, Yatinuwara, Udunuwara, Gangawata Korale, Gampola ,Kundasale, Pathadumbara and Harispattuwa in the Kandy District , Ukuwela, Galewela, Matale, MC Matale and Rattota in the Matale District and Rikillagaskada in the Nuwara Eliya District.

During the year 2007, a total 565 DF/DHF cases were reported from government health institutions and 3 deaths reported. The incidence rate calculated for the high risk MOH areas declined from was 1.84 in 2006 to 0.37 per 1000 population in 2007. Special Campaign Aedes vector surveillance was initiated in 2000 more stringent action should be done with the support of all local governments to ensure that communities are mobilized to reduce the breeding of the vector.

Entomological surveillance plays a critical part in ensuring that epidemics are prevented and also plays a vital role by taking timely action taken to prevent further spread of disease. In the year 2007, comparatively high *Ae. aegypti* density (container, premises and breteau indices) was observed in MOH areas, namely, Matale and Rattota in the Matale District and Akurana, Gampola, Gangawatakorale, Yatinuwara, Kundasale, Pasbage and Wattegama in the Kandy District. High *Ae. albopictus* density was observed in all most all high risk MOH areas.

Table :5.14 Aedes Aegypti & Aedes albopictus larval density by MOH areas in the Central Province 2007

	Aedes Aegy	pti larval de	ensity	Aedes albo	pictus larva	dex index .00 3.00 -12.00 3.00-27.33 .95 7.03 0-9.00 0.00-9.00 0-1.00 10.00	
MOH area	Container	Premises	Breteau	Container	Premises	Breteau	
	index	index	index	index	index	index	
Matale District							
Dambulla	0.00	0.00	0.00	3.26	3.00	3.00	
Galewela	0.00-2.75	0.00-4.00	0.00-2.67	3.26-28.27	2.86-12.00	3.00-27.33	
Matale	0.00-4.16	0.00-5.00	0.00-5.00	10.66	5.95	7.03	
MC Matale	0.95	0.77	0.88	0.00-7.5	0.00-9.00	0.00-9.00	
Rattota	0.00-4.76	0.00-3.33	0.00-1.00	0.00-19.05	0.00-1.00	10.00	
Ukuwela	0.00	0.00	0.00	5.47-5.48	2.38-7.89	2.38-4.00	
Yatawatta	0.00	0.00	0.00	21.50	15.12	23.26	
Kandy District							
Akurana	2.01-8.66	2.00-5.29	5.82-2.00	0.00-6.12	0.00-4.95	0.00-5.94	
Doluwa	0.00	0.00	0.00	5.79	7.00	7.00	
Galagedera	0.00	0.00	0.00	11.62-29.41	3.00-10.68	5.00-19.42	
Gampola	1.98-3.31	0.83-5.68	0.83-5.68	1.11-9.27	0.81-7.69	0.81-13.46	
Gangawatakorale	0.00-3.06	0.00-3.00	0.00-4.00	5.69	4.58	4.58	
Yatinuwara	0.00-5.88	0.00-1.92	0.00-1.92	1.89-17.86	0.98-4.00	0.98-4.60	
Kandy MC	1.96-2.43	1.00-2.00	1.00-2.00	0.00-11.76	0.00-6.00	0.00-6.00	
Kundasale	0.00-7.29	0.00-7.58	0.00-8.33	1.94-15.38	1.94-17.00	1.94-20.00	
Pasbage	2.17-7.27	4.00-8.00	4.00-8.00	0.00-3.62	0.00-5.00	0.00-5.00	
Poojapitiya	0.00	0.00	0.00	5.75	5.14	5.71	
Talatuoya	5.04	5.00	6.00	3.36	4.00	4.00	
Udunuwara	0.00-0.98	0.00-3.97	3.97	0.00-13.33	0.00-4.00	0.00-4.00	
Wattegama	1.45-5.88	1.61-4.00	1.61-4.00	0.72-7.35	0.81-4.00	0.81-5.00	
Werallagama	0.00-4.08	0.00-2.00	0.00-2.00	0.00-6.98	0.00-3.10	0.00-3.00	

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Larvivorous fish, *Poecilia reticulata* was applied in water storage tanks in the Province. However, the use of fish has declined in 2007 as compared to 2006. The MOH areas and the number of fish applied are given in the table below.

Table . 5.15 Application of larvivorous fish in water storage containers in different MOH areas in the Central Province

District	MOH area	No. of fish applied	
		2006	2007
Kandy	Gangawatakorale	1500	1600
	Kandy MC	2000	1000
	Kundasale	2000	600
	Medadumbara	600 500	
	Wattegama	1500	00

	Werallagama	1300	00
	Yatinuwara	500	00
Matale	Dambulla	1025	8450
	Galewela	750	1768
	L/Pallegama	900	2106
	Matale	200	2676

A very few number of space spraying was carried out under special circumstances in the Province both in 2006 and 2007. The number of rounds of space spraying in each MOH area is given in the table below.

Table . 5.16 Number of rounds of space spraying in the MOH areas

District	MOH area/		2006			2007	
	Institution		l	1		l	I
		No. of	No. of	Amount of	No. of	No. of	Amount of
		patients	rounds	insecticide	patients	rounds	insecticide
		covered		used (lit)	covered		used (lit)
Kandy	Akurana	03	01	1.5	00	00	00
	Galaha	02	01	0.5	00	00	00
	Gangawatakorale	00	00	00	03	03	1.5
	Yatinuwara	Army camp	02	2.5	00	00	00
	Kandy MC	02	02	5.25	01	01	0.25
		Kandy	13	13	Peradeniy	03	2.5
		Peradeniya			а		
	Kundasale	02	02	1.5	00	00	00
	Medadumbara	00	00	00	01	01	0.25
	Talatuoya	00	00	00	01	01	0.125
	Werallagama	00	00	00	02	02	0.5
Matale	Dambulla	02	02	1.6	00	00	00
	Galewela	12	5	2.5	00	00	00
	Matale	18	9	2.4	00	00	00
	MC Matale	24	20	9.95	03	2	1.2
	Pallepola	2	2	0.4	00	00	00
	Rattota	13	7	3.6	00	00	00
	Ukuwela	26	11	2.5	3	3	1.2

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In the Kandy District, 63 cleaning programmes in 4 MOH areas, and 48 programmes in 3 MOH areas were carried out in 2006 and 2007 respectively. In the Matale district, 04 and 03 cleaning campaigns have been carried out in 2006 and 2007 respectively. The details are given below.

Table:- 5.17 Cleaning campaigns carried out in different MOH areas in the Central Province

District	MOH area	2006			2007		
		No. of	No. of	No. of	No. of	No. of	No. of
		programmes	houses	breeding	programmes	houses	breeding

			visited	sites		visited	sites
				eliminated			eliminated
Kandy	Akurana	06	480	72	Nil		
	Gampola	11	960	83	10	1110	91
	Kundasale	22	1600	169	16	1320	106
	Wattegama	24	2100	183	22	1800	176
Matale	Ukuwela	01	120	34	01	100	16
	MC Matale	02	650	53	02	240	38
	Rattota	01	150	21	Nil		

The details of health education programmes conducted in the Central Province is given in Table below

Table: 5.18 Health Education activities carried out in the Central Province by District

		2006		2007		
	Target group	No. of	No. of	No. of	No. of	
		programmes	participants	programmes	participants	
Kandy	Health staff	24	1005	18	760	
	Community	37	2390	47	2170	
Nuwara	Health staff	6	265	5	195	
Eliya	Community	11	695	7	650	
Matale	Community	32	1837	20	9798	

In August 2007, a study was initiated to identify the DF/DHF risk levels of different GN areas in the MOH areas in the Kandy District, based on entomological, epidemiological and environmental parameters. The study will continue till August 2008.

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5.5.2 Surveillance of Leptospyrosis

The number of leptospyrosis cases notified in the Central Province has increased from 141 (5.6 per 100,000 pop) in 2006 to 336 (13.2 per 100,000 pop) in 2007, which is more than 200% increase. The total number of leptospirosis cases notified in Sri Lanka has also seen an increase during 2007 was 2198 (11.0/100,000 population), which is almost 40% increase compared to 1582 cases notified in 2006. 15.4% of the total cases in Sri Lanka was reported

from the CP. Both Matale and Kandy Districts come within the 8 Districts reporting over 100 cases with the highest incidence (i.e. 37.8/100,000) being reported from Matale. Over the years, there has been an increase in the number of leptospirosis cases reported. The number of notified cases do not reflect the actual incidence of leptospirosis as Patients with the mild form of disease do not seek treatment at all or they are treated at the OPD. In addition, a large number of patients seek treatment at the private hospitals and these cases are generally not notified. Paddy cultivation takes place in most of the high risk areas and the peak incidence is observed during paddy sowing and harvesting seasons. Increase in the rodent population in and around paddy fields during these periods contributing to this. This seasonal trend is important to be highlighted as it helps in planning prevention activities including provision of chemoprophylaxis to high risk groups.

In addition to routine surveillance activities, hospital- based sentinel surveillance was started in 2004 in order to obtain more information on the epidemiology, exposure history, clinical presentation, laboratory investigation and prophylactic treatment. This information is to facilitate/ revise prevention and control strategies. With the addition of District General Hospital, Matale in 2007, 3 out of the 16 sentinel hospitals are within the CP.

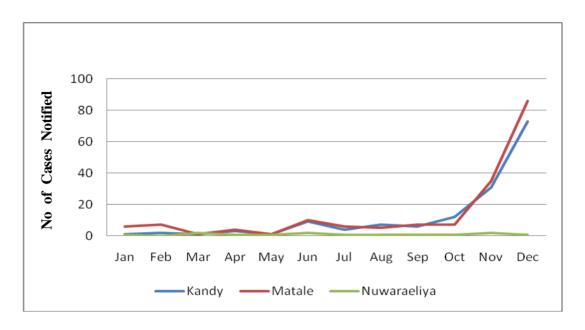
Out of 34 deaths reported from sentinel sites, 10 were from GH Matara (case fatality rate 3.9%) and 06 were from BH Horana (case fatality rate 6.3%). Though only 4 deaths were reported from the TH Peradeniya, it recorded the highest case fatality rate of 8.2%. Increasing number of deaths due to leptospirosis indicates the importance of early care seeking by the patients and early diagnosis and appropriate management by the healthcare providers.

The need for an audit of these deaths was identified as a key to improve the early detection and appropriate treatment and should be implemented in both the Districts in 2008. There is no prevention and control programme for leptospirosis and only ad-hoc programmes are being carried out by some interested MOOH at the divisional level. The need to prepare action plans focusing more on environmental measures, improved disease surveillance, public awareness, inter-sectoral coordination, improved clinical management including laboratory surveillance and chemoprophylaxis should be done in all high risk MOH areas to prevent a further increase in 2008.

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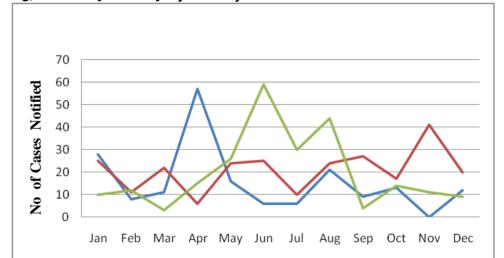
Fig;- 5.5 No of Cases of Leptospyrosis



5.5.3 Surveillance of Dysentery

In the 2007, 809 cases of dysentery were notified in the Central Province at a notification rate of 31.6 notifications per 100,000 population. This is 11.0% of the total notifications of 7292 cases reported in Sri Lanka. Dysentry continues to be an endemic disease with gross under reporting due to most patients seeking treatment from the private sector. More effort needs to be taken to ensure that the notification improves in the Province. There was NO out break of dysentry reported in the year 2007 despite high risk conditions prevailing. A detailed multi-sectoral medium and long term plan needs to be prepared in the Central Province if the burden of water borne diseases are to be reduced.

– Nuwaraeliya



Matale

Fig;- 5.6 No of Cases of Dysentery

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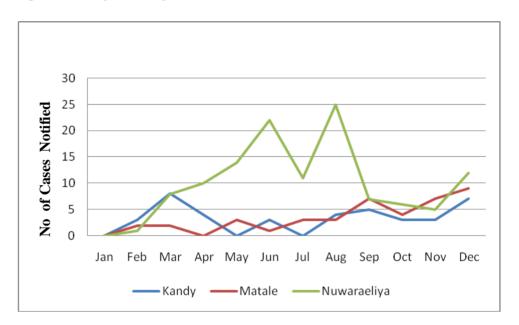
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5.5.4 Surveillance of Enteric Fever

Kandy

Total number of 228 cases of Enteric fever was notified in the Central Province during the year at 8.9 notifications per 100,000 population. This is in comparison to 326 cases (notification rate of 12.9 per 100,000 pop) notified in the previous year.

A total of 1805 enteric fever cases were notified in 2007 from the entire country at a notification rate of 8.95 notifications per 100,000 population. Nuwara Eliya District has reported the third highest number of cases (notification rate of 16.7 per 100,000 pop) after Jaffna and Colombo Districts.



Fig;- 5.7 No of Cases of Enteric Fever

5.5.5 Surveillance of Viral Hepatitis

In the year 2007, 2677 cases of viral hepatitis were reported from the Central Province with a notification rate of 104.9 per 100,000 Population, compared to 446 cases in the year 2006. A total of 5869 cases were reported from Sri Lanka of which 45.6% was from the Central Province. The increase was due to a Hepatitis out break in the Udapalatha area which later spread to Kothmale, Doluwa, Udunuwara and yatinuwara MOH areas. The details of the outbreak are given in Chapter 6 and page



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5.6. Expanded programme on immunization

The national immunization programme has been a successful and a model programme for developing countries. According to the routine information system virtually all eligible children and women through out are receiving all the scheduled vaccines. Periodical surveys and the recently concluded DHS 2006 have all verified this high coverage. The high immunization coverage has resulted in the decline in the targeted diseases reported. EPI coverage data based on the EPI quarterly returns show a high coverage for all vaccines given during infancy and childhood. However the coverage for antigens administered during school years is yet to reach the desired levels.

Table. 5.19 Trends on selected vaccine preventable diseases

Year	Year Tetanus		Whoopii	ng Cough	Measles		Encepha	litis	Viral He	Viral Hepatitis	
	Central Province	Total Sri lanka	Central Province	Total Sri lanka							
1990	5	58	21	281	88	1315	8	310	644	2768	
1992	5	77	10	33	11	303	10	195	1676	6895	
1996	5	67	2	27	2	55	3	295	662	3690	
1997	4	42	29	405	84	147	14	109	1090	3830	
1998	7	61	14	152	32	65	15	93	409	2814	
1999	3	46	7	85	128	1861	2	89	118	1589	
2000	5	45	10	134	661	13216	4	122	167	1486	
2001	8	72	3	43	24	267	1	59	396	2034	
2002	0	34	1	14	11	139	0	68	810	2936	
2003	6	40	5	118	22	114	10	165	725	2984	
2004	4	44	9	50	13	86	2	111	324	2220	
2005	7	37	1	114	10	48	7	60	131	2294	
2006	3	45	2	71	7	36	16	130	462	2765	
2007	3	39	2	47	21	81	14	203	2681	5869	

Table. 5.20 Immunization coverage in the Central Province

		2006			2007	
Antigen/Dose	Number	% Coverage estimated births	% Coverage DPT 1	Number	% Coverage estimated births	% Coverage DPT 1
DPT 1	45,757	89.0	100.0	46,323	91.1	100.0
DPT 2	45,016	87.6	98.4	46,029	90.5	99.4
DPT 3	44,153	85.9	96.5	45,412	89.3	98.0
OPV 1	45,823	89.1	100.1	46,208	90.9	99.8
OPV 2	45,094	87.7	98.6	45,944	90.4	99.2
OPV 3	45,241	88.0	98.9	45,286	89.1	97.8
Hep B 1	45,651	88.9	99.8	46,318	91.1	99.9
Нер В 2	45,074	87.8	98.5	46,063	90.6	99.4
Нер ВЗ	43,366	84.4	94.8	45,362	89.2	97.9
Measles	44,834	87.2	98.0	46,169	90.8	99.7
MR	44,402	86.4	97.0	45,167	88.8	97.5
DT 5 years	43,079	83.9	94.1	43,574	85.7	94.1

The reporting of adverse events following immunization (AEFI) has shown a gradual increase. The AEFI reporting in all 3 Districts have improved in 2007 as compared to 2006 but the reporting in the Nuwara Eliya District is relatively low. The reporting of AEFI and the timeliness of the reports needs to be strengthened in 2008.

Table. 5.21 Reporting of Adverse Events Following Immunization in Central Province

		2006			2007	2007		
	Number	Number Percentage Sri L		Number	Percentage	Sri Lanka percentage		
Completeness	454	92.3	91.3	483	98.1	97.2		
Timeliness	140	30.8	30.6	177	36.0	37.1		
Nil Returns	243	53.5	58.5	172	34.9	46.2		
Total no. AEFI	599	*70.2	* 61.5	1085	*127.5	*94.5		
Abscess reported	129	*20.4	*13.3	116	*13.6	*18.1		
Severe local actions reported	199	*31.5	* 15.0	97	*11.4	*13.3		

^{*} Rate per 100,000 doses

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5.7. Environmental Health

The Ministry of Health is not directly responsible for the provision of water. However through the primary healthcare workers health education is carried out to motivate people to consume water which is safe. Inadequate latrine facilities are still a problem in the Central Province being more acute in the Nuwara Eliya District. The monitoring of Environmental Health activities are through the quarterly return of Environment Health. It is noted that the District Health managers do not give adequate attention to the timely collection and collation of this return. This needs to be addressed as a priority in 2008. Water and sanitation coverage reported for the Province for 2007 was 68.0% and 82.0% respectively. During the year 4519 latrines were constructed in the Province. The Central Provincial council needs to identify the necessary funds to provide financial assistance of Rs. 6000/= to families with an income of less than Rs. 2500/= to promote the construction and renovation of latrines.

Table. 5.22 Water & Sanitation activities provided by Public Health Inspector

Indicator	:	2006	2	2007
	Number	Percentage	Number	Percentage
Number of Houses in the sanitation Register	520,731	-	528,971	-
Number of houses with sanitary latrines	475,140	91.2	433,985	82.0
Number of houses without latrines	41,910	8.0	45,927	8.7
Number of latrines constructed during the year	3,681	-	4519	-
Number of houses with pipe borne water connection	245,013	47.1	245,777	46.5
Number of houses using water from protected and deep wells	164,810	31.6	113,529	21.5
Number of houses using water from unprotected and other sources	110,908	21.3	169,665	32.1
Number of public water supplies sampled	430	-	244	-
Number of private water supplies sampled	96	-	33	-
Number of wells chlorinated	3,511	-	2614	-

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Food safety and hygiene activities reported during 2007 show that a gradual improvement in the rating of Food factories but a decline in the bakeries and hotels/restaurants. This needs to be closely monitored at Divisional and District level in 2008. Closer monitoring using the revised H 800 with sub grouping in "B category" and "C category" would enable to see more clearly the improvement in each of the categories. Inspection of food handling establishments have decreased in 2007 as compared to 2006. Details of Food safety and hygiene activities are given in the table below. A total of 1122 formal samples were sent by authorized officers in the Central Province of which 306 were found to be unsatisfactory. A total of 226 Prosecutions were done.

Table. 5.23 Food Safety & hygiene activities provided by Public Health Inspector

	20	006	2	2007
	No. registered	Percentage	No. registered	percentage
Registration of food handling establishments				
Factories	441	-	687	
A grade satisfactory	211	47.8	317	46.1
B grade fair	190	43.1	358	52.1
C grade unsatisfactory	40	9.1	12	1.7
Bakeries	795	-	837	-
A grade satisfactory	367	46.2	329	39.3
B grade fair	357	44.9	419	50.1
C grade unsatisfactory	71	8.9	89	10.6
Hotel, Restaurants	1,134	-	1230	-
A grade satisfactory	588	51.9	563	45.8
B grade fair	487	42.9	482	39.2
C grade unsatisfactory	59	5.2	185	15.0

			T .	
Inspection of Food handling establishments				
Number inspections	22,830	-	18452	-
Number served notice	968	4.2	894	4.8
Number prosecuted	88	9.1	118	13.2
Number convicted	92	* 104.5	74	62.7
Food Sampling				
Number formal samples taken	445	-	1122	-
Number unsatisfactory	228	51.2	306	27.3
Number prosecuted	192	84.2	226	73.9
Number convicted	144	75.0	101	44.7
Number of formal iodized salt samples taken	58	-	159	
Food seizures				
Number of food seizures	4,580	-	7130	-
Number of awareness prg. on food safety				
Traders	1,005	-	943	-
Public	1,193	-	2186	-

The area of food safety needs to be strengthened in 2008.

Occupational Health activities reported show that 591 factories are registered with the Health sector. During inspections 447 defects were found of which 46 were referred to special units.

4365 Environmental pollution problems were reported in 2007 of which 94.9% were investigated by the PHI. 358 were referred for action while 4045 were settled.

842 volunteers were recruited in 2007. By the end of 2007, 5055 Volunteers were reported to be assisting in preventive Health activities in the MOH areas.

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5.8 Cosmetics Drugs and Devices

The primary goal of the Cosmetic, Drugs and Devices act No. 27 of 1980 and amendments was the protection of public welfare through regulating control of the manufacturing, importing, transportation, storing and selling of Cosmetics, drugs and devices. Few can deny that the public should be protected or that Government should play a role in the protective effort. In Sri Lanka without a license issued by the Drug Regulatory Authority no person can manufacture, import, store, transport or sell cosmetics, drugs and devices. The authorized officers around Sri Lanka such as Provincial Directors of Health Services, Regional Directors of Health Services, Medical Officers of Health and Food and Drug Inspectors ensure that the act is implemented.

The Food and Drug inspectors play a key role to ensure that regular inspection of premises where Cosmetic drugs and devices are manufactured, stored and sold, taking of samples, seizing and detaining any article which is in violation of the act, encourage proper licensing and also create awareness on "responsible pharmacy management". At present there is great concern among the public and also among the concerned professionals on the dispensing of drugs over the counter without prescription and also the increasing trend in smuggled drugs.

It should be noted that in 2007, only 2 of the 5 Food and Drug Inspector posts were filled while 3 posts remained vacant since 2002. Steps have been taken by the Provincial Department of Health to fill these vacancies by early 2008. It is envisaged that in 2008 more effort will be taken by the Food and Drug Inspectors to ensure "responsible pharmacy management" and also create a scoring system to monitor the improvement and also include a reward system. It is also envisaged that more effort will be taken to remove all drugs which are reported as quality failure from the DRA

Table;-5.24 Activities related to Drugs, Cosmetics & Devices -2007

	2006				2007			
	Kandy	Matale	N-Eliya	Total	Kandy	Matale	N-Eliya	Total
No. of pharmacies	137	41	54	232	142	38	57	237
No. Registered	114	35	47	196	126	35	50	211
No Unregistered	23	6	7	36	16	3	7	26

<u>Drugs</u>								
No.of Manufacturing	1		1	2	1		1	2
establishments								
No. Licensed Renewal Retail	94	35	47	176	112	35	40	187
No. Inspected Renewal retail	94	41	47	182	112	35	40	188
<u>Sampling</u>								
Samples sent for analysis - Formal			1	1			4	4
Samples send for analysis - informal	6	5	8	19	9	8	6	23
No. Found unsatisfactory	2	4	1	7	1	4	1	6
No of items withdrawn/withhold	264	7	21	292	561	8	115	684
Quantity withdrawn/withdrawn (Tab/cap	21000	28	10500	31528	57000		108000	16500 0
Quantity Failure Drugs Report by								
the D.R.A.	46	26	58	130	42	42	49	133
No of items withdrawn/withhold	432	8	220	660	510	3	402	915
No of batches withdrawn/withhold	16	6	20	42	25	2	72	99
Quantity withdrawn/withhold	6400		38000	44400	57000		51000	10800
								0
Flying Squad Activities								
No of flying squad Activities	12	8	9	29	7	8	7	22
Seizures Under the C.D.D. Act	12	<u> </u>	<u> </u>				,	
Unregistered	46	5	26	77	10	6	6	22
Prohibited		2	1	3	12	2	7	21
Smuggled	5		4	9			20	20
Expired	124	18	234	376	530	20	785	1335
Spoilt & Damaged	12	25	27	64	20	15	54	89
With state logo	2		1	3				0
Storing without a license	7	6	8	21	3	8	16	27
Others			0	0	-			0
<u>Prosecutions</u>								
No of prosecutions	13	3	10	26	11	4	9	24
No Convicted	8	2	6	16	8	3	11	22
No pending	5	1	4	10	3	1	3	7
Fines imposed(RS)	110250	17600	64000	191850	102500	15000	105000	222500
Cosmetics				I		<u> </u>		
No. of Manufacturing				0				0
establishments								
Seizures Under the C.D.D. Act				0				0
Smuggled	2	6	1	9		5		5
Expired	15		51	66			137	137
Spoilt & Damaged				0				0
	1							

No of Manufacturing	1		1	2	1		1	2
establishments								
Seizures Under the C.D.D Act	2			2				0
Smuggled		4	1	5		2		2
Expired	21		60	81	45		155	200
Spoilt & Damaged	1			1	9		-	9
Educational Programmes								
Pharmacy Owners/Assistants	18		4	22	15		4	19
Schools	4	2	2	8	6	1	5	12
Others	14	16	6	36	9	13	5	27

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5.9 Supportive Supervision

Supportive supervision has been used to improve health worker performance globally and has been identified as a key area that needs to be strengthened in the health master plan and also the recently concluded Maternal and Newborn health external review in Sri Lanka. Supportive supervision is a process that promotes sustainable and efficient program management by encouraging effective two-way communication, as well as performance planning and monitoring.

Ongoing supervision is an important, often overlooked, step to ensuring quality of health services. While supervision can be a very participatory process, traditional supervisory visits focus more on inspection and fault finding rather than on problem solving to improve performance. Health workers often receive little guidance or mentoring on how to improve their performance. They are frequently left undirected, with few or no milestones to help assess their performance, until the next supervisory visit. Motivation is hard to maintain in such an atmosphere. Supervisors often lack the technical, managerial, or supervisory skills needed to effectively evaluate health facilities across the many sectors for which they are responsible. In addition to assessing performance, supervisors are also expected to monitor services, evaluate management, and ensure that the health facility supply chains are working properly all in a short period of time. Consequently, they are unable to provide adequate technical guidance and feedback to improve service delivery.

Supportive supervision requires commitment of the supervisory staff. Supportive supervision, if done correctly will promote quality at all levels of the health system by strengthening relationships within the system, focusing on the identification and resolution of problems, helping to optimize the allocation of resources, promoting high standards, teamwork, and better two-way communication. The personal commitment of all programme managers and closer monitoring at Divisional and District level are required to ensure that supportive supervision is strengthened in the Central Province in 2008.

Table;-5.25 Summary of supervision of staff - 2007

	Kandy	Matale	Nuwara	Total
			Eliya	
District level technical managers				
Medical Officer Maternal & Child	*62	35	02	99
Health				
Regional Epidemiologist	16	29	¤02	47
Regional Dental Surgeon	04	88	¤13	105
Regional Malaria Officer	02	**05	NA	07
Supervisions by DDHS/MOH				
No. PHMM supervised	347	255	160	762
No. of PHII supervised	101	65	49	215
No. SPHM/PHNS & SPHI supervised	33	33	25	91
No. of institutions supervised	110	80	73	263
Supervisions by Public Health				
Nursing sisters				
No. of PHMM supervised	616	222	162	1000
No. of SPHM supervised	26	12	11	49
No. of MCH/FP clinics supervised	696	309	497	1502
Number of reports submitted	1198	466	242	1906
Number of investigations conducted	151	78	38	267
for infant deaths				
Number of Local conferences	217	105	57	379
conducted				
Supervision by Supervising Public				
Health Midwife				
Number of PHMM supervised	1147	397	332	1876
Number reports submitted	1035	301	342	1678

Source quarterly statement of supervisory staff – format C

5.10 Health Promotion Activities

Health education is a integral part of Healthcare that is concerned with promoting healthy behavior. A person's behavior may be the main cause of the health problem. However it can also be the main solution. Through health education we help people understand their behaviors and how it affects their health. Health education encourages behaviors that promote health, prevent illness, cure diseases and facilitate rehabilitation. Health

^{*} Combined total of both MOMCH

x Number of supervisions second six months (first six month posts vacant)

^{**} On overseas leave for six months

promotion is defined as the process of enabling people to increase control over and to improve their health. The Ottawa charter for health promotion has identified 5 main actions; Build healthy public policy, Create supportive environment, Strengthen community action, Develop personal skills and Reorient health services.

Health promotion activities have been decentralized to the Provinces and are being coordinated by Health Education Officers. The role of Health Education officers in planning ,implementing, monitoring and evaluating health promotive programmes are critical if we are to see a behavior change in the community. The new guidelines developed by the Health Education Bureau has paved the way to strengthen health promotion activities in the Province.

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Table: 5.26 Health Promotion Activities carried out in the Central province

Indicator	20	06	20	07	
	Number of Programmes	Number of Trained/ participated	Number of Programmes	Number of Trained/ participated	
1-Public Health staff - B.C.C. Training	26	701	12	485	
- I.E.C. Material production Workshops	07	202	08	237	
2- Hospital H .E.					
- No. of HE units	13	54	18	68	
- B.C.C. Training	13	385	03	135	
 I.E.C. Material production Workshops 					
3- School H.E.					
 Special Programs (ex. Quiz prog., Poster comp.) 	01	125	03	130	
 Awareness program using mobile van 	122	8394	159	17817	

4- Community				
 Awareness using Mobile van 	167	20511	146	8716
- Exhibition	17	21000	10	5000
- Other – specify eg. Home garden	-			-
5- Government and other departments	18	615	20	562
6- Special days (Eg. World Health Day)				
Activity	09	1800	11	2250
- walk , Exhibition				
- Poster competition	-	-	-	-
- Other specify	-	-	01	-
7- Diseases out break Response				
- I.E.C. materials Produced	01	-	01	1000
- IEC Strategy implemented	28	1300	01	2500
- Volunteer program	09	438	05	354
8- Production of HE –Material +Publication - Item No			-	-
9- Operational Research	01	-		

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6. SPECIAL EVENTS

6.1 The Flooding of District Base Hospital Dambulla

The flooding of Dambulla Base Hospital took place in the early hours of the morning of 22nd of December 2007 and left many a problem in its wake. The Labour Room, Operating Theatre and Drug Stores sustained the most damage while the Laboratory, Blood bank, OPD and wards suffered to a relatively lesser degree.

6.1.1 Evacuation:

Amidst all the chaos the immediate concern was for the patients trapped in the wards. The three Defense Forces and other volunteers responded immediately to the cry for help made by the Medical Superintendant and the staff of the hospital and rescued the many patients trapped in the flooded hospital wards. Unfortunately there had been a peak in the number of admissions during that period and many a ward was filled with the maximum number of patients.

By 7.30 AM all the patients had been evacuated to a safe place and later they were either transferred to General Hospitals Kandy, Kurunegala and Base Hospital Matale while some were discharged home. The Defense Forces and volunteers assisted this activity by giving transport facilities to these patients.

After the safe evacuation of patients the next problem to be faced was the damage created by the flood waters which had risen up to a height of four feet and also the fact that some of the units were still inaccessible.

6.1.2 Cleaning up:

The debris which had collected in the hospital and its premises had to be cleared and the staff members of the Provincial Directors Office, Technical College, Ceylon Electricity Board and thye Defence Forced and also volunteers from NGO's also helped in this activity along with the hospital staff. The wards and all the buildings were fumigated and sterilized completely.

Estimation of the loss and damages to property were done by a team of professionals from the Ministry of Health.

6.1.3 Resumption of services:

The general idea after the flooding was that a minimum period of 2 weeks was needed to resume the OPD services in the Hospital. But due to the assistance given by the Governor, Chief Secretary, Secretary, Provincial Director, Central Province, Regional Director of Health Services-Matale and various political personnel, on Christmas day, only 3 days after the disaster, the hospital was successful in resuming services in the Out Patients Department.

The Emergency Treatment Unit commenced its services from the 27th of December. The Eye ward and the Pediatric wards were spared by the flooding and these wards were able to be utilized soon after the flooding. But commencements of eye surgeries were delayed due to the damage to the Eye Theater.

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6.1.4 Drug stores:

Although the Drug Stores were located on a higher elevation, due to the tremendous force of the flood waters, this establishment was completely submerged and most of the drugs destroyed. But fortunately enough drugs were spared to run the ETU.

6.1.5 Operating theatre:

The Operating Theatre and its equipment were totally submerged during the floods. The equipment had to be cleaned and then sterilized. Due to the immense assistance given by Dr.R.B.Ekanayaka and his team of the Bio Medical Engineering Unit, Central province, 90% of the surgical equipment was salvaged. Only one surgical machine worth Rs.22, 00000.00 was sent to its parent company and repaired.

After the cleaning, repairing and sterilizing, a team of professionals from the MRI in Borella were brought down to test the quality and standards of the equipment. This whole process took about 10 days after which the OT resumed its usual services. The same procedures were done for the Eye theatre and this was also opened within a period of 10 days.

6.1.6 The Labour room:

The Labour Room was one of the places to be badly damaged in the floods and the equipment too sustained substantial damage and the LR services were disrupted from the 22nd onwards. The process of sterilization of this unit would have taken at least 2 weeks.

The construction of a new labour room for the hospital had been underway but had come to a standstill half way through. This was pointed to the Provincial Minister at a Progress Review meeting held at the hospital a few days after the flooding. With the full co-operation of the Secretary, the Provincial Director and the concurrence of the Central Government a massive effort was made to finish the constructions to this new building. And within 5 days the new Labor Room commenced its services.

Dr.U.G.Kariyawasam was involved in obtaining mattresses and equipment from the Family Health Bureau in Colombo.

6.1.7. Blood bank:

The services of the blood bank had come to a standstill after the flood crisis. But within a period of five days and with the help of the Central Blood Bank the hospital managed to commence the services of the Blood bank.

6.1.8 Laboratory:

The Laboratory faced a similar situation. But with the assistance of the Health Ministry, Central Province laboratory services were resumed within a period of one week.

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6.2 Earth slip at Walapane.

Due to the heavy rains in the area another earth slip took place in Walapane on 12th January 2007 displacing 2238 families and 7583 lives. The affected areas were Walapane, Padiyapelelle, Nildannahinna and Udupussellawa .persons. The displaced families were sheltered in 42 refugee camps located in schools, temples and Community centres etc. MOH Walapane and his staff including Public Health Nursing Sister, Supervising Public health Inspector, Supervising Public health midwife, Public health Inspectors, Public health midwives and other office staff participated in health related activities.

Continuous supervision of the all the camps were done by the MOH and AMOH and supervision of major camps was carried out by DPDHS and MOMCH Nuwara Eliya, MO-Epidemiology Unit and Consultant Community Physician Central Province.

The largest camp at Batagolla MMV was supervised by Provincial Director of Health Services-Central Province, Director-HEB and CCP-FHB.

6.2.1 Supervision & Participation:

A medical team from G.H Nuwaraeliya conducted daily treatment units at Batagolla M.M.V and this team examined and treated refugees dwelling at Walapane Praja Shalawa & Egodakanda School. MOOH from Nuwaraeliya district were visited these camps daily on roster basis. Health Camps for displaced persons also conducted by the doctors from TH Peradeniya and Kandy with the help of Sarvodaya and Islam Social Service. A medical team from DH Walapane also participated with an ambulance and assisted with emergency services.

Team of PHII with SPHID from Badulla and PHII from other MOH areas of N.E district also gave their assistance in health related activities.

All the camps were visited by medical teams. The identified diseases were treated (5 watery diarrhea cases, 21 conjunctivitis cases and 1 case of Mumps)

Public health inspectors engaged in prevention and control of communicable diseases by, ensuring the continuous supply of safe water, promoting hygienic food practices and garbage disposal through health education. Public Health Midwives were responsible for provision of

maternal and child health activities and family planning activities (OCP & DMPA)in the camps

As special activities construction of water seal toilets for effected families with the help of Green movement of Sri Lanka and the assistance of JOCA was done. Supply of clothes and other items for children with the help of FHB / UNICEF /SLFPA.

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6.3 Earth slip at Hanguranketha.

Due to the heavy rains in the area an earth slip took place in Hanguranketha in the MOH division of Rikillagaskada on 12th January 2007 displacing 1598 families and 6092 lives. The affected areas were Manakola, Dehipe and Rahathungoda each having a population of 20826, 13445 and 17700 respectively.



The handling of the crisis situation resulting from this natural disaster took place in three parts:

- 1. Attending to the casualties
- 2. taking care of the displaced families
- 3. handling health and other problems arising in temporary shelters

1. Attending to casualties:

- The hospital nearest to the disaster area was DH Rikillagaskada and preparations were made in order for the hospital and staff to be able to handle the casualty load.
- A generator and an ambulance were given at the disposal of the hospital.

2. Taking care of displaced families:

The displaced families were given temporary shelter in refugee camps at Rahathungoda, Manakola, Dehipe and Hanguranketha.



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- Construction of temporary toilets and supply of toilet buckets were taken care of by RCSSL
- The RCSSL also supplies boiled drinking water to the camps.



3. Handling health and other problems arising in temporary shelters.

A mobile medical team consisting of doctors from DH Rikillagaskada, RH Hanguranketha, RH Mooloya, DH Maturata, RH Gonapitiya, CD Manakola and MH Mandarannuwara; and the MOH, Public health nursing sister; 2 SPHMs; an SPHI and 5 PHIIs visited the camps daily and identified and treated both Communicable (one case of Mumps, 3 diarrhea cases and 2 conjunctivitis cases) and Non Communicable Diseases. Due to their timely action it was possible to keep the numbers with Communicable diseases to a minimum.



- A team of doctors from TH Peradeniya headed by Dr.Lamawansa (VS) visited the refugee camps to provide medical assistance
- The doctors identified and treated acute and chronic illnesses of the refugees. This was done in a make-shift tent in the campsite. The drugs were supplied by The Dalada Maligawa and Health Ministry.
- Another team of health personnel comprising of the DPDHS Kandy, MOH Kadugannawa, Regional Epidemiologist Kandy and ECP Kandy also visited the camps to provide assistance.

A fly control program was carried out the Malaria control unit.

6.4 Control of Viral Hepatitis outbreak at Gampola MOH area - 2007

A sudden increase in the number of Viral hepatitis cases was notified to Gampola MOH office from the Teaching hospital Gampola during the latter part of the 2nd week of May 2007.

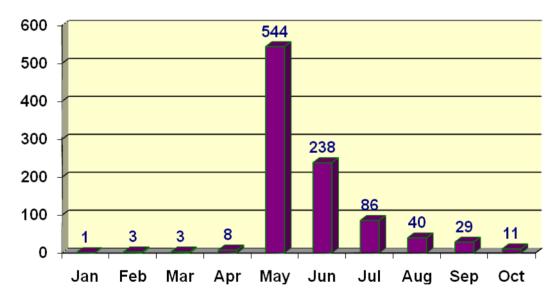


Fig 6.1 Number of cases reported during 2007 as in figure below:

Actions taken at the Provincial Level:

Short term:

- Health staff from all MOH areas in the province utilized to visit all houses in the Gampola MOH area.
- Food establishments in the Gampola UC area was regularly inspected and corrected by the team of PHII.
- All toilets and drainages were corrected under supervision of PHII.
- Super chlorination of water sources were closely monitored with water board officials.
- Regular review meetings held with all stake holders at PD office.

Long term:

- 50 toilets built in New Peacock estate during 2007.
- Quality water supply ensured by the NWSDB and construction of treatment plant started at Paradeka.
- Relevant parties were informed to construct toilets in all estates in catchment area and closely monitored by the PDHS office.

Food establishments before epidemic:









Food establishments after epidemic:



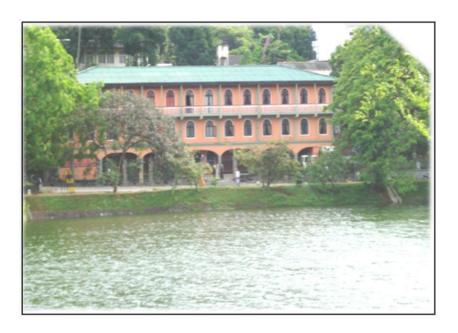


6.5 Special achievements

There were several special achievements of note during the year 2007.

The office of the Provincial Director of Health Services won the runners up position for the second consecutive year among all the departments of the Central Provincial council for the quality award competition conducted by the Chief Secretariat office of the Central Province. This award was the result of the inspiration and hard work of many working in the department.

PDHS Office – Central Province





Special Events

Divisional hospitals Bokkawala and Mampitiya were awarded commendation certificates at the Health Sector Excellence Awards 2007 conducted by the Ministry of Healthcare and nutrition. These awards were for their efforts in providing a friendly client centered service, with improved standards of care. Some of the aspects that had been improved were the responsiveness of the health services provided, the appearance of the hospitals, better organization of day to day hospital activities, access to religious activities, accommodation of complaints, waste disposal and the welfare of hospital staff.

Furthermore, following 3 officers working in the Central Provincial Health Department were also received awards at the Health Sector Excellence Awards 2007 conducted by the Ministry of Healthcare and nutrition for their contribution towards the improvement of the health system in Central Province.

- 1 D.B.H Karunaratne (Public Health Midwife MOH office Wattegama) **3**rd **place –** Midwife category
- 2 Dr. R.M. S. Ratnayake (MOIC, Bokkawala) **Comendation certificate** Specialists/MOO/DSS/RMO category
- 3 H.M.S.K. Herath (Program and Planning Officer RDHS office, Nuwaraeliya) **Comendation certificate** other categories

Another achievement in Matale district also deserves mention. The MOH in Pallepolla, was able to complete the construction of a clinic centre costing around Rs 450000 at Kotanapola (Kandewatte). While Rs 100000 was provided by the Health Sector Development Project immunization subcomponent and the rest of the funds were found by the MOH staff. They were able to solicit the corporation of the local community for the finances. The community also provided free labour during the construction phase. Community participation was also apparent when subsequent improvements were made to the garden.

While this effort was not rewarded by an award, like many other such efforts that go unmentioned, this is a testament to the commitment of the staff.

Divisional Hospital Bokkawala



Divisional Hospital Mampitiya



7. Special Campaigns

7.1 Respiratory Disease Control Unit

The resurgence of tuberculosis globally, and its association with HIV and the emergence of multi-drug resistant TB has made tuberculosis a communicable disease of high priority. Matale and Nuwaraeliya Respiratory Disease control units, are attached to District General Hospitals. Respiratory Disease control unit Kandy is functioning separately at Bogambara while inward patients care located at Teaching Hospital Kandy. All three units are functions under purview of the consultants' chest physicians.

Table. 7.1 Incidence of Tuberculosis cases by type

Туре	2006	2007
PTB smear +ve	557	507
PTB smear -ve	486	471
ЕРТВ	343	319
Total	1386	1297

Total no of new Tuberculosis cases were higher in year 2006 compare to 2007. Number of smear positive cases and extra pulmonary cases were decreased in 2007 compare to 2006.

Table. 7.2 Case detection rate per 10000 population of the new smear positive cases

District	Estimated target	2006	2007
Kandy	389	343	303
Matale	135	86	89
N-eliya	211	72	126
Province	735	501	518

Case detection rate is bellow the estimated targets in both years in all three districts and it has decreased in year 2007 in Kandy District and increased in Matale and Nuwareliya Districts compare to 2006.

Table. 7.3 Percentage distribution of new smear positive cases by sex

District	2	2006		07
	Male	Female	Male	Female
Kandy	64	36	67.7	32.3
Matale	63	37	79	21
N-eliya	60	40	63	37

Province 62 38 69.9	30.1
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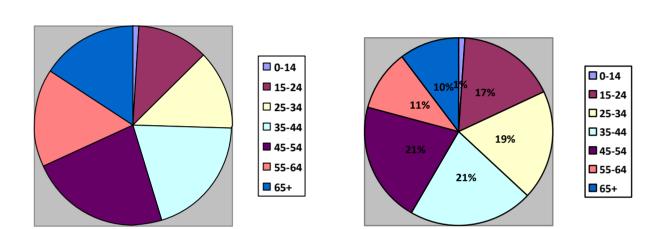
Percentage of females among new smear positive cases has increased in all three districts compare to year 2006. It was highest in Nuwaraeliya district.

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Fig. 7.1 Percentage distribution of new smear positive cases by age -

2006



2007

Table. 7.4 Distribution of new cases of TB by district

	2006	2007
Kandy	994	864
Matale	162	195
Nuwaraeliya	174	172
Province	1330	1231

Number of new cases of Tuberculosis diagnosed during year 2007 has decreased in Kandy and Nuwaraeliya Districts, while in the Matale District the number of new cases detected has increased compared to 2006.

Table 7.5 Clinic attendance

	2006		20	007
Category	Number	%	Number	%
Referred	5795	31	7129	30.6
Self referred	7553	40	10,475	44.9
Contacts	400	02	735	3.1

Medicals	5047	27	4996	21.4
Total	18,795	100	23,335	100

Self referred cases to clinics in the Province have increased compare to year 2006. This may be due to awareness programmes conducted for the general population through public health staff and increased number of outreach clinics by the chest clinics in respective Districts.

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Table 7.6 No of investigations carried out and results

	2006	2007
No of smears examined	21,847	26,288
No of smear positive slides	752	1149
No of smear negative slides	21,095	25,169
No of X rays carried out	9815	24,446
No of films used	10,083	24,514

Number of smears examined and slide positive rate in all three clinics in the province has increased compare to year 2006. Number of X rays carried out has markedly increased in 2007 compare to the previous year while the wastage of films was decreased from 2.7% in 2006 to 0.2% in 2007.

7.2 Mental Health Services

Mental health services provided in the Central Province has improved gradually over the years and has been identified as model for mental health care. The services include a network of mental health clinics, management of acute patients, medium stay and long stay rehabilitation units and community mental health services. This programme is supported by the Psychiatry Department of the Peradeniya University, Psychiatry unit Teaching Hospital Kandy. The Mental Health Resource Centre was established in Katugastota to strengthen the planning, coordination and implementation of the mental health programme in the Central Province. 'Nivahana society" a NGO actively supports the mental health programme in the programme.

Table .7.7 No of functioning clinics by district

	2006	2007
Kandy	12	18
Matale	07	10
Nuwaraeliya	07	12
Province	26	40

No of functioning clinics in the Central Province has increased to 40 with appointment of new Medical Officers (Mental Health) to the Base Hospitals and selected District Hospitals in all three districts compare to year 2006.

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Special Campaigns

Table 7.8 No of new cases referred by category

	2006		2007	
Category	Number	%	Number	%
From DH	419	68	426	72
By PHM	125	20	103	18
Other	74	12	62	10
Total	618	100	591	100

Referrals from District Hospitals has gradually improved compare to year 2006 due to peripheral health staff training, especially Medical officers and Registered/Assistant Medical Officers.

Table 7.9 Diagnosed new cases by type of disease

	2006		2	007
Category	Number	%	Number	%
Depressive	1535	46	1192	40
Psychotic	740	22	645	22
Neurotic	244	07	229	8
Substance misuse	317	10	345	12
Childhood	57	02	92	3
Mental retardation	66	02	76	2
Other	344	11	392	13
Total	3303	100	2971	100

In both years nearly two third of newly diagnosed cases includes depressive and psychotic disorders in the Central Province. However there is a reduction of new cases of depressive disorders detected in 2007 compare to year 2006. This may be due to correct diagnosis by the Medical Officers who had undergone training in Mental health.

Table 7.10 No. of persons trained by category

	2006	2007
Medical Officers/ RMO	424	46
Other Health staff	1986	378
Grama/ Samurdhi Niladhari	1,277	-
Pre school teachers	389	184
School teachers	522	239
Volunteers	1001	265
Estate Medical Assistance	110	-
Community development officers	124	-
School children	644	864
Social service officers	-	-
Religious leaders	-	274
Heads of the Departments	-	28
Total	6,477	2076

Special Campaigns

Mental Health resource centre has trained more than 2000 people in the Central Province in 2007. This includes mainly school children & other categories of health staff, other government employees and volunteers. During year 2007 as a new category Religious leaders were trained. The MHRC should focus on strengthening the training of health workers through skills development of the different categories of staff.

7.3 STD HIV/AIDS Control Programme

Early case detection and management, partner notification, contact tracing, health education, counseling, condom promotion, surveillance and dissemination of information are the major strategies adopted by the National Sexually Transmitted Diseases/ AIDS Control Programme (NSACP), for the prevention and control of STI and HIV/AIDS. Main clinic in the Province is situated at the premises of the Teaching Hospital Kandy, while Matale and Nuwaraeliya clinics are situated in the respective District General Hospitals.

Table 7.11 Clinic attendance and no of new diagnosed cases by district

	Kandy		Ma	tale	Nuwar	aeliya
	2006	2007	2006	2007	2006	2007
Total clinic attendance	5576	3898	3353	4903	1508	3055
Syphilis	68	52	13	06	05	07
Gonorrhea	61	28	07	02	15	08
NGU/NGC	166	175	-	01	15	08
Genital Herpes	135	122	15	17	07	04
Candidacies	163	183	07	08	22	21
Other STI	221	196	80	18	13	03
Non STI	591	462	59	74	60	-
Total No of cases	1405	1218	181	126	137	51

Total clinic attendance in Matale and Nuwaraeliya Districts has increased in year 2007 as compared to 2006 while the number has decreased in the Kandy District. Majority of new cases includes candidacies, Genital Herpes, Gonorrhea and other STI.

Table 7.12 Serology test for Syphilis

	20	006	2007		
	Total VDRL	VDRL +ve	Total VDRL	VDRL +ve	
STI clinic attendees	3240		2711	55	
Antenatal mothers	26,602		28,449	7	
Pre-employment	3966		6004	4	
Other	3626		6419	-	
Total	37,434	86	43583	66	

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Special Campaigns

Number of serology tests for Syphilis (VDRL) carried out among antenatal mothers, preemployment and other categories has increased in year 2007 as compared to 2006.

Table 7.13 Serology tests for HIV

	2000	5	2007		
	Total HIV tests	HIV +ve	Total HIV tests	HIV +ve	
STI clinic attendees	3252	06	3837	13	
Other	1440	-	1680	-	
Sentinel sites	824	824 01		03	
Total	5516	07	6179	16	

Number of HIV tests done at clinics has increased in 2007 as compared to the previous year. The number of diagnosed cases of HIV/AIDS has increased by 2 fold. The need to strengthen the primary prevention activities and also increase the awareness of safe sexual practices needs to be strengthened among the vulnerable groups and also the high risk populations in 2008.

7.4 Rabies Control activities

Rabies control measures were launched in Sri Lanka in 1975 and was decentralized to the Provinces in the early 90s. The Central Province initiated the streamlining of rabies control activities in 1998 through the formation of dog vaccination teams and destruction teams.

During mid 2006 the Ministry of Healthcare and Nutrition revised the strategy to be more humane towards dogs by promoting dog birth control measures instead of dog destruction. The CP has already implemented this change of strategy in the Provincial strategy.

The programme by 2007 have gradually been strengthened to include 6 teams for routine dog vaccination, 5 teams mobilized for community dog vaccination using auto plunger. The strengthening of human resources for Rabies control have resulted in a slight increase in the vaccination coverage to 54.0% from 50.6% of the dog population. 13,225 female dogs were given temporary birth control injections while 452 female dogs were sterilized in 2007.

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Special Campaigns

Table. 7.14 Rabies Situation and Control activities by Districts in the Central Province.

	2	006		20	007	
Activity	Estimated DP	Number	%	Estimated DP	Number	%
Dog Vaccination						
Kandy	166819	83229	49.9	168417	97302	57.8
Matale	58282	35657	61.2	58898	31683	53.8
Nuwaraeliya	90761	40992	45.2	91425	43257	47.3
Central Province	315862	159878	50.6	318740	172242	54.0
Dog Elimination						
Kandy	50045	2191	4.4	50525	Nil	
Matale	17485	1203	6.9	17669	Nil	
Nuwaraeliya	27228	5614	20.6	27427	Nil	
Central Province	94758	9008	9.5	95621	Nil	
Dog Birth control (temporary						
method)						
Kandy	40036	1130	2.8	40420	6391	15.8
Matale	13988	2146	15.3	14135	4389	31.1
Nuwaraeliya	21782	851	3.9	21942	2445	11.1
Central Province	75806	4127	5.4	76497	13225	17.3
Human Rabies Deaths	-	03	*0.12		05	*0.20

* Incidence rate per 100,000 population

Rabies Control activities

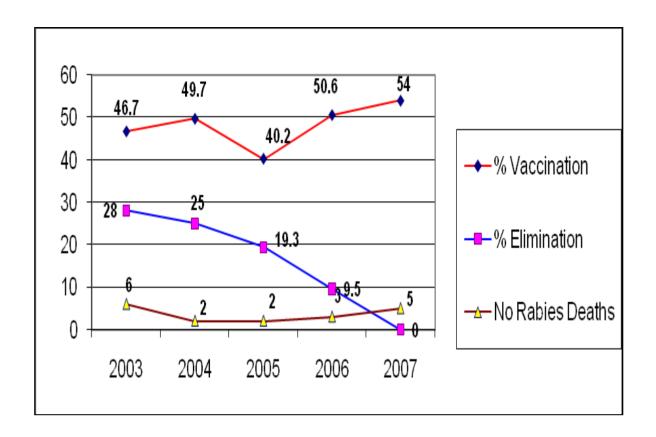




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Fig-: 7.2 Rabies Control Activities

Special Campaigns



Despite the relatively high vaccine coverage the number of dog bites, the use of Anti rabies vaccine and Anti rabies serum shows a gradual increase (see table below). 5 human rabies deaths were reported in 2007 as compared to 3 in 2006. This clearly shows that Humane dog control programmes and also responsible dog ownership should be strengthened in the Central Province if we are to succeed in having a model rabies control programme. The Provincial Ministry has already requested the support of the Provincial Department of Animal Health, local governments and NGOs to assist in streamlining the provision of sterilization programmes in 2008.

Table: 7.15 Post exposure prophylaxis used in the Central Province 2004-2007

		2004	2005	2006	2007
Human ARV	No. doses	55457	38692	69784	117923
	Approx. cost (Rs. Million)	5.9	4.1	7.5	12.7
Human ARS	No. doses	6325	3316	4573	10992
	Approx. cost (Rs. Million)	4.1	2.1	2.9	7.1
Total cost	Rs. Million	10.0	6.2	10.4	19.8

Table: 7.16 The use of Human ARV and ARS by hospital in the Central Province 2007

	Human ARV		Human ARS	
Institution	Number of	percentage	Number of	percentage
	doses		doses	
TH Kandy	67969	57.6	5983	54.4
TH Peradeniya	13508	11.5	2366	21.5
TH Gampola	8659	7.3	164	1.5
DGH Matale	7107	6.0	295	2.7
DGH Nawalapitiya	12298	10.4	1620	14.7
DGH Nuwara Eliya	6459	5.5	201	1.8
BH Dambulla	1923	1.6	363	3.3
Total	117923	99.9	10992	99.9

7.5 Malaria Control Programme.

Malaria is an important public health problem in the Central Province of Sri Lanka. Thousands of malaria cases have been reported with periodic epidemics every 3-6 years prior to 1992. However, since 1992, the number malaria cases in the Province showed a decreasing trend of malaria, and in the year 2007, only 04 P. vivax cases were reported with no indigenous transmission of malaria in the Central Province. This is a significant achievement for the Province. Some of the very important contributory factors for this success were (1) institution of evidence based malaria control activities, (2) support given by the Provincial and Central government authorities (3) implementation of Global Malaria control strategies in 1993 (4) institution of rotational and rational residual insecticide spraying based on the GN level stratification according to the risk of malaria transmission (5) Institution of integrated vector control measures using insecticide treated bed nets, use of larvicides, introduction of larvivorous fish and source reduction where ever applicable (6) conducting Mobile clinics in remote areas and to cover migratory populations such as security camp, gem mining areas, development project sites and chena cultivation areas for early detection and prompt treatment of malaria cases in order to reduce the parasite reservoir in the human population,

(7) Investigation of cases and carrying out timely remedial measures including mass blood surreys and focal spraying and (8) the improvement of the socio economic status even in the rural communities.

The Anti malaria programme will embark into pre elimination phase of malaria in Sri Lanka in early 2008. Within this concept, the Central Province was placed as an area to maintain zero level transmission of malaria. Thus, the objective of the malaria control programme for 2008 in the Central Province will be "to maintain zero level transmission of malaria in the Central Province".

Fig.: 7.3 Trends of malaria cases reported by District from 1976 - 2007

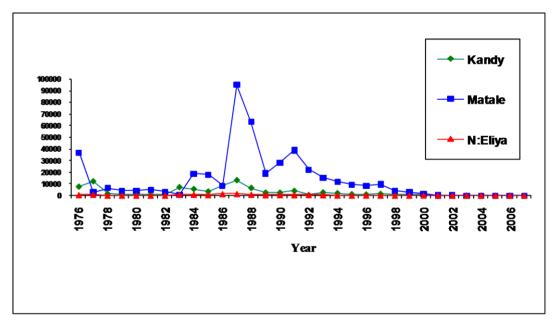


Table. 7.17 Number of Malaria cases reported by District from 2000 - 2007

				Central
Year	Kandy	Matale	Nuwara Eliya	Province
2000	710	1419	206	2335
2001	248	390	84	722
2002	150	228	19	397
2003	73	63	2	138
2004	14	75	1	90
2005	15	19	0	34
2006	5	7	0	12

2007	4	0	0	04
2007				0-7

Special Campaigns

In the year 2007, 26,387 blood smears were collected in the Kandy District, of which 04 were positive for *P. vivax*. These 4 persons had contracted the disease outside the Province but had been treated in medical institutions within the Central Province. In the Matale and Nuwara Eliya Districts, 11,674 and 183 blood smears have been collected respectively in the year 2007 with no positives for malaria.

Table. 7.18 Number of blood films, malaria cases and Annual Parasite Incidence (API) by District

District	Year	No. of	No.of	P. Vivax	P.	Mix	API (1000
		Blood films	positive		Falciparum		population)
	2005	26,704	17	13	4	0	0.02
Kandy	2006	27,737	6	2	3	1	0.01
	2007	26,387	4	4	0	0	0.008
	2005	10,940	20	18	02	00	0.04
Matale	2006	17,305	7	06	00	1	0.01
	2007	11,674	0	0	0	0	0
	2005	145	00	00	00	00	00
Nuwaraeliya	2006	291	00	00	00	00	00
	2007	183	0	0	0	0	0

14 Anophelines species were recorded in the Matale District. The major vector of malaria in Sri Lanka, *An. culicifacies*, and one of the important secondary vectors, *An. subpictus* were encountered in the year 2007 too. *An. varuna* was incriminated as a secondary vector in gem mining areas in L/Pallegama MOH area. *An. culicifacies* collected from Cattle baited huts with a density of 1.64 per hut. *An. subpictus* was also encountered in substantial density with 7.57 *An. subpictus* per CBHC. In the Kandy and Nuwara Eliya districts, 15 anopheline species were recorded. *Anopheles culicifacies*, was encountered throughout the year in DDHS area Hanguranketha. *An. subpictus* was encountered only in cattle baited hut collection with a very low density (0.29 per hut).

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Special Campaigns

In Tumpane and Hataraliyadda, *An. culicifacies* appears seasonally. In the rest of the area *An. culicifacies* appears periodically. This explains the endemic nature of malaria in the areas close to the dry zone (MOH area Minipe, Hanguranketha and Walapane), epidemic nature of malaria in the wet and intermediate zone (intermediate zone located more towards the dry zone) in the Kandy and Nuwara Eliya Districts. The density of *An. culicifacies* and *An. subpictus* are shown in table 7.19

Table 7.19. Entomological surveillance by Districts in the Central Province

District	Methods	Indicator	2006		2007	
			An.	An.	An.	An.
			culicifacies	subpictus	culicifacies	subpictus
Matale	INRC	No/Room	00	00	00	0.02
	PSC	No./Room	0.04	0.04	0.003	0.185
	СВТ	No/Trap	0.11	1.7	0.016	1.375
	СВН	No./Hut	27.72	29.62	1.641	7.569
	WTC	No./Trap	0.001	0.008	00	0.009
	LS	No./Dip	0.06	0.03	0.008	0.015
Kandy	INRC	No/Room	00	00	00	00
	HBNC	No/bait/hour	00	00	06	00

	PSC	No./Room	00	00	00	00
	СВТ	No/Trap	0.05	00	0.35	00
	СВН	No./Hut	00	00	0.36	0.29
	WTC	No./Trap	00	0.02	00	00
	LS	No./Dip	0.007	00	0.15	00
N'Eliya	INRC	No/Room	00	00	00	00
	HBNC	No/bait/hour	00	00	05	00
	PSC	No./Room	00	0.04	00	00
	СВТ	No/Trap	0.21	3.8	0.35	00
	СВН	No./Hut	0.82	1.32	00	00
	WTC	No./Trap	00	00	00	00
	LS	No./Dip	1.8	0.06	0.09	00

Special Campaigns

The following Vector control activities were carried out in the Central province

A. Indoor Residual Insecticide spraying

In the Kandy District 1838 houses had been sprayed with Fenitrothion. In the Nuwara Eliya district 508 houses have been sprayed while in the Matale District 6904 houses had been sprayed. The insecticides used in Kandy and Nuwara Eliya Districts were Fenitrothion while in the Matale District Fenitrothion and Vectron were used.

Table. 7.20 Indoor Residual Insecticide spraying in by District in the Central Province

				ion		Houses		Population	Insecticide used
District	Year	Villages	houses	Population	fully	partially	Closed/ refused	Protected (%)	Fenitrothion Packets
Matale	2005	104	3649	14408	3211	278	160	11258 (78%)	3623
	2006	97	9855	25684	8447	410	998	27186	8484
	2007		6904	19082	6396	131	377	19082	5648
Kandy	2006	Nil							
	2007	06	923	3697	900	15	08	3582	

N' eliya	2006	Nil						
	2007	03	508	2357	508		2357	

Special Campaigns

B. Impregnation of bed nets with Permethrin

Table 7.21 Impregnation of bed nets with Permethrin by District

District	Year	No.of	Bed nets	Insecticide used
		families		Liters(Permethrin)
Matale	2005	1393	2168	32.5
	2006	1075	7040	105.6
	2007	900	4075	80.0
	2005	321	348	05
Kandy	2006	136	166	03
	2007	295	295	03

Long Lasting Impregnated bed Nets were not received for the Districts in the Central Province.

C. Application of Insect Growth hormone, pyriproxyfen to the gem pits

Table .7.22 Application of Insect Growth hormone, pyriproxyfen to the gem pits in Matale

Year	No. of gem pits	Pyriproxyfen	Population protected
		used Kg	
2005	5400	28.3	4687
2006	5632	29.8	4972
2007	1457	8.5	1205

Note: No application of Insect Growth Hormone, pyriproxyfen in the Kandy and Nuwara Eliya districts in the years 2006 and 2007.

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Special Campaigns

D. Application of larvivorous fish, Poecilia reticulata

Table .7.23 Application of larvivorous fish, Poecilia reticulata in the Central Province

District	Year	No.of permanent	No.of fish
		breeding places	introduced
Kandy	2005	106	2500
	2006	00	00
	2007	340	1400
Matale	2005	205	1095
	2006	321	1655
	2007	700	15000
Nuwaraeliya	2005	900	5500
	2006	540	2550
	2007	300	1000

8 Fish stock tanks were built in L/Pallegama (2), Galewela (2) and Dambulla (3), Naula (1) were built under the Global fund project)

7.6 Health Education and awareness programmes

Table 7.24 Health education and community awareness programmes conducted by District

District	Year	Target group	Number of	Number of
			Programmes	participants
Matale	2005	Community	08	400
	2006	Community		1047
			20	
	2007	community	35	1225
Kandy	2005	Community	03	200
	2006	Community	03	452
	2007	schools	03	1200
Nuwara Eliya	2005	Community	02	250
	2006	Community	03	460
	2007	Community	03	250

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Special Campaigns

The community health awareness needs to be further strengthened in 2008 to sustain the success of malaria control activities.

Since the malaria control programme is embarking into a pre eradication phase, case detection and prompt appropriate treatment is of utmost importance where blood filming of fever cases is of utmost importance. The present number of Public Health Field Officers (PHFO) is inadequate for achieving this target it is recommended that cadre approval be obtained to increase the number of PHFO for the Central Province.

The Anti Malaria Programme in Matale, Kandy and Nuwara Eliya Districts needs to further intensify vector surveillance since monitoring vector density is of utmost importance in preventing malaria outbreaks/ epidemics. Minipe, Adikarigama (river bed below the dam Victoria), Hataraliyadda, Kotmale, Nilambe, Ambagamuwa In Kandy and Nuwaraeliya districts and Galwewela, L/Pallegama, Dambulla Malaria high risk areas should be surveyed regularly to detect emergence / increase of *An. culicifacies*. The Anti Malaria Programme carry out dengue vector surveillance, in addition to the malaria control hence provision of good vehicles for the Entomological teams should be considered as a priority for 2008.

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Special Units

8. Special Units

8.1 Patient Rehabilitation Services

Physical Rehabilitation Center: Digana.

Due to lack of facilities and trained staff, the rehabilitation of physically disabled patients does not get adequate attention in the general health services. Most acute cases are managed in surgical and medical wards in general hospitals after which the patients may get discharged without any attention being paid to rehabilitation. Usually they end up as bed ridden or wheel chair dependant disabled citizens and are a burden to their family and society. This is not acceptable in the current civilized society. According to the 1999 statistics of Teaching Hospital Kandy, for the 1st six month of 1999, 1100 patients who needed medium and long term rehabilitation were discharged *without a proper rehabilitation plan*.

In 2001 with government and other well-wishers' donations, the Department of Health Services Central Province decided to develop a rehabilitation hospital in the underutilized rural hospital at Digana (about 15 km away from Kandy town).

Due to the constraint in financial and human resources it was proposed that the rehabilitation project be carried out in a phased manner.

1st phase - 25 beds - 2001 June 2nd phase - 50 beds - 2007 April

The two phases have been completed and services successfully delivered.

The total investment for the infrastructure development in the second phase was about 52 million rupees.

The available services are

- 1. Inward facilities: (There are 30 beds for male patients, 20 beds for female patients and 10 beds allocated for pediatric patients. All residential facilities are provided for these patients.)
- 2. Medical Management:
 - There are four Medical Officers in residence and a Senior Registrar from Kandy General Hospital visits the patients on a routine basis.
- 3. Physiotherapy:
- 4. Occupational Therapy:
- 5. Vocational Training:
- 6. Supply of disable appliances free of charge:
- 7. Counseling services by professional counselors:
- 8. Training of relatives in the care of the disabled:
- 9. Staff training:
- 10. Follow up after discharge:

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Special Units

Community Resettlement

Community resettlement is a crucial factor in the rehabilitation of the disabled and is yet to be addressed even at National level. A community resettlement program is underway at Digana Rehabilitation Hospital and up to now 52 resettlement activities have been carried out.

The resettlement protocol is as follows.

1 In-ward Social Assessment of the patient by Social Services Officer

- 2 Home visit by the Occupational therapist, Physiotherapist, Medical Officer and Social Services Officer
- 3 Recommendation Social Services Department Health Department
- 4 Seeking assistance from NGO's where necessary.
- 5 Organization of self employment and income generation program.
- 6 Follow up by DMO's, MOH's and rehabilitation team.
- 7. Those patients who need long term follow up are introduced to the Central Province Community Based Rehabilitation program.

Table. 8.1 Summary of basic information and services delivered at Physical Rehabilitation Center: Digana

		2006	2007
No	Activity and Description		
01	Total No. of Admission	155	213
02	Discharge With total recovery	87	85
03	Total No. of Deaths	00	02
04	Total No. of Vocational Training given	48	50
05	Total No. appliances given free of charge		
	 Wheelchairs 	35	12
	 Crutches 		06
	Walking aides		-
	Others	J	02
06	No. of Patients Counseled	23	20
07	No. of Home Visits	42	24
08	No. of successfully resettled Patients	28	63
09	No. of .training programs		
	For Patients	02	00
	For the Staff	00	00
10	General OPD average Per day	110	121
11	Medical clinic average per day	13	146
12	Medical clinic average per Week	121	146
13	Maternity clinic average per Week	66	41



Special Units















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The Regional Health Training Center, Kadugannawa was upgraded in 1990 as part of strengthening the basic services program in Sri Lanka. The RHTC function as a training centre for conducting both basic and in-service training courses / programs. Prior to 1990 only PHMM basic training part II was conducted in Kadugannawa. Medical Officer of Health (MOH) division Yatinuwara serves as the field practice area for this purpose. There are two main areas of services supported by the RHTC. The first is in the area of training. This involves basic training of primary health care personnel, namely Public Health Inspectors and Public Health Midwives. In addition it conducts Basic training for medical, dental and nursing students on community health. The regional training center coordinated the hospital attendants training for the Provincial Department of Health. The regional training center also coordinates all the Provincial level in-service training for both preventive and curative health staff. Special effort has been taken to upgrade the library facilities while a new computer lab was established during the year.

The second is to provide primary health care services to the public through the field staff. This includes maternal and child health care (immunization, ante natal care, post natal care, well women clinic & family planning), environmental health, food sanitation, occupational health, estate health and school health etc. Special effort has been taken to improve the care provided as "model area" to facilitate the learning of all students.

The regional training should be supported further to improve the computer laboratory while being supported to play a bigger role in the activities related to Provincial training. The appointment of staff to the area should be based on performance to enhance the learning of the students and to function as a model MOH area for the Province.







Table- 8.2 - Training Courses/Programmes - 2007

Basic Training Courses / Programmes		
Name of Course / Program	No. of Batches	No. of Students
Community nursing field programs	01	186
Midwifery part II training	01	44
Attendant Training	04	373
Basic Training Courses / Programmes		
Name of Course / Program / Workshop	Target Croup	No. of
Name of Course / Program / Workshop	Target Group	Participan
		ts
First aid program	Health Staff	150
60 hours in –service Training program	Minor Staff	22
Symposia Pediatric emergencies Training program	Medical officers	113
Court Procedure	PHII	31
Community Participating method	Health Staff	36
In –service Training program	Overseas	28
Management Training program	Nursing officers	49
In –service Training program	Medical officers	107
In –service Training program	Hospital PHMM	18
CEPELS program	Medical officers	70
CEPELS program	Nursing officers	54
Health Development Plan	MO/PPO/PHI	65
Other Training Program		
Health Promotion School program	Principles	50
Health Promotion School program	School children	172
STD/Aids program	School children	178
STD/Aids program	Youth Leaders	25
Food Handling Establishment	Traders	220
World children day program	preschool children/Their parents/Teachers	300

8.3 Bio-Medical Engineering Services Unit.

The repairing of all medical equipment prior to 2002 was carried out by the Bio- medical Engineering Services unit in Colombo (BES). There are 224 hospitals under the Central Provincial Health Department and it was impossible for the BES to take care of equipment repair and maintenance and large number of serviceable medical equipment were stocked in hospitals unable to be used due to minor repair. Medical equipment needing major repairs in secondary care hospitals were done by the BME unit on urgent requests. The Province did not have proper procedures for purchasing, condemning and maintenance of medical equipment. The Central Province Bio - Medical Engineering Services unit was established in November 2002 with the aim providing better coordinated support services within the Province to do equipment purchasing, maintenance and attend to minor repairs to medical equipment and to maximize the equipment usage time.

Major Functions of BME Unit- Central Province

- 1. Repair of medical, surgical and other equipment in the health institutions within the Central Province
- 2. Provision of reports on equipment and other items to be condemned in health institutions
- 3. Provision of technical guidance on purchasing of new equipment to health institutions.
- 4. Provision of quality reports on newly purchased medical equipment.
- 5. Distribution of newly purchased equipment to health institutions.
- 6. Keeping inventory of medical equipment available at institutions.
- 7. Training health staff on maintenance of medical equipment.

The services provided by the BMES unit has gradually improved with the limited staff available. The equipment repaired by type is given in the table below. It is evident that more equipment had been repaired in 2007 as compared to 2006 and were made available for the provision of patient care.

Special Units

Table 8.3 List of medical equipments repaired during year 2006 and 2007

Type of Equipment	Name of Equipment		Quantity
		2006	2007
General	BP Apparatuses	95	246
	Suckers	45	88
	Nebulizers	60	53
	Autoclaves	15	49
	Boilers	17	-
	Sterilizers	55	43
	Mini Autoclaves	20	-
	Glucometers	05	02
	Spot Lamps	15	14
	Refrigerators	18	-
	Oxygen Regulators	-	03
Laboratory Equipment	Water Baths	09	-
	Microscopes	05	06
	Spectrophotometers	04	09
	Colorimeters	03	-
	Flame Photometers	01	-
	Hot Air Ovens	07	-
	Centrifuge machines	15	08
High Tech Equipment	Defibrillators	08	-
	High Pressure Sterilizers	12	17
	ECG machines	35	28
	Syringe pumps	12	-
	Infusion pumps	16	02
	Pulse Oxymeters	05	25
Radiology Equipment	X-ray illuminators	10	-
	X-ray machines	-	19
	Scanning machines	06	02
Theatre Equipment	Mobile Theatre Lamps	04	-
	Diathermy machines	08	-
	Theatre Lamps	02	10
	Theatre Tables	04	-
	Anesthetic machines	-	06
	Theatre Beds	-	11
Dental Equipment	Dental Chairs	12	
	Hand pieces	25	
	Compressors	18	
			101
	Portable Dental Units	05	
	Cavitrons	07	
	Light Cure Machines	03	
Pediatric Equipment	Phototherapy units	30	13

	Infant Warmers	02	04
	Scales	10	
Obstetric Equipment	Doppler machines	09	
	CTG machines	15	03
Ophthalmology Equipment	Slit Lamps	-	05
	Ophthalmoscope	-	07
ENT Equipment	Diagnostic Sets	-	07
	Laryngoscopes	12	04

Special Units

The BME Unit has seen a new vigor with the taking up of duties by the new OIC. The team of dedicated workers have been working silently and have been instrumental in saving millions of rupees for the healthcare system in the Central Province.

The BME unit in 2007 has carried out a Survey on the availability of medical equipment in all key Provincial hospitals and also taken steps to recommend only the essential equipment to be purchased while also supporting in the redistribution of the equipment.

The BME unit has established a system of quick repair and delivery of damaged medical equipment without a back log. Documentation of equipment received and delivered are being maintained upto date. The BME unit has also taken the challenge regularly checking and servicing of major equipment and also attending to urgent repairs. Equipment which had been deemed beyond repair have been successfully repaired by the team at the Bio-Medical Engineering unit.

The BME unit has commenced a regular awareness program at no additional cost for hospital staff on the usage and preventive maintenance of medical equipment. This has changed the attitude of the staff using these equipment. In 2007, six such programs were conducted mainly in DBH Dambulla, Rikillagaskada, Dickoya and some large Divisional Hospitals around Kandy District.

During hospital visits the BME team inspects all the medical instruments used and condemned by that institute. The discarded equipment is brought back to the unit, repaired and re-distributed to other hospitals needing them. A Sticker system with the hospital name, type of equipment and inventory number are pasted on each medical instrument belonging to the hospital. This in the long term will prevent the damage to the equipment by using plasters, Cello tape etc for the above purpose.

Special mention should be made on the role played by the unit during the floods which affected the DBH Dambulla. According to the Audit Department the estimated cost of damage to the hospital equipment was Rs 1.5 million. The BME team took prompt action to clean and repair all the damaged equipment for a mere sum of Rs. 5500/= within a few days. The electrical technician of the unit was able to successfully repair the malfunctioning anesthesia machine at DBH Dambulla, within a short period of time, there by assisting in the theater facilities to be established within a period of 48hrs. A massive amount of time,

money and inconvenience to the people of Dambulla was averted due to the timely action. To felicitate him and to encourage the others a gold medal was presented.

The cost saving to the Department of Health for some of the equipment repaired is given below. It is important to document the cost saving to the department as a routine system to ensure that due recognition is given to the staff of the BME unit.

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Special Units

Table 8.4 The cost saving to the Department of Health for some of the equipment repaired is given below

Hospital	Name of equipment	Estimated cost of		ed cost of Amount spent by	
		repair R	s	BME Unit	Rs
DBH Dambulla	Anesthetic machine	4:	5,000		2,700.00
DGH Matale	Anesthetic machine	4:	5,000		1,800.00
DGH Nawalapitiya	Anesthetic machine	4:	5,000		1,950.00

Before



After











Special Units

The BME Unit has made progress in leaps and bounds in 2007 and a very positive feedback from the heads of institutions on the timely back up support provided by the team. The following needs to be addressed as a priority to ensure the smooth functioning of the BME unit in 2008. The construction of a new BME unit with basic facilities, provision of a vehicle and formal advanced training for all staff of the BME unit. The procedures of purchasing spare parts in emergencies and purchase of regular spare parts needs to be streamlined to maximize the benefit that the team could play in the prompt repair of medical equipment.

8.4 Dental Services

8.4.1 Preventive and Curative Dental Services

The incidence of oral cancer is the highest among all malignancies in Sri Lanka. A high incidence of other oral diseases such as cleft palate and lip, odontogenic tumors, and other oral lesions is also recorded. Moreover, the demand for specialized dental treatment and fixtures (e.g. Dentures, braces etc and other orthodontic treatment) is on the increase. However at the moment patients who need these services are compelled to seek them from the few major dental hospitals in which these facilities are available.

In the Central Province, as well as in other parts of the country, dental services are provided both in the public and private sectors. The public sector provides not only curative but also preventive oral healthcare delivered by dental surgeons and dental therapists. Dental services in the public sector are provided through the Hospital Dental Clinics, School Dental Clinics, Community Dental Clinics and Adolescent Dental Clinics. The former delivers mainly curative services while the latter three provide preventive oral health services. These are distributed in the three districts in the following manner.

Table-8.5 Dental Services in Central Province

Dental clinic	Numbers				
	Kandy	Matale	Nuwara Eliya		
Hospital Dental Clinics	29	09	22		
Community Dental Clinics	03	03	-		
Adolescent Dental Clinics	02	-	01		
School Dental Clinics	31	10	06		
Mobile Dental Clinics	01	-	01		

As the incidence of dental caries and periodontal disease is on the rise, the delivery of Dental care services is considered a primary health care activity.

There is a Regional Dental Surgeon for each district and he/she participates in the planning and monitoring of dental services in his/her area and this has helped to establish an effective system to share information and to improve the delivery of dental care services.

In the Central Province, the Provincial Director of Health Services organizes the steering committee meeting which is participated by the Community Physicians, Districts Managers, Heads of special institutes and the Regional Dental Surgeon. They meet at regular intervals and discuss issues and monitor the progress of the dental care services in the Central Province.

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Special Units

Table - 8.6 Performance of Dental Surgeons

	Kai	ndy	Matale		Nuwara Eliya	
	2006	2007	2006	2007	2006	2007
No. of extractions- deciduous	3337	2711	2366	1258	12292	18625
No. of extractions- permanent	54116	43466	22846	25938	-	17331
No. of restorations- temporary	14732	10070	5923	5648	3658	4241
No. of restorations- permanent	16669	14230	4617	5653	J	4022
No of referrals to consultant clinics	4176	2098	-	-	240	291

Table -8.7. Performance of School Dental Therapists

	Kandy		Matale		Nuwara Eliya	
	2006	2007	2006	2007	2006	2007
No. of students screened completely	46854	44622	12425	12246	-	-

No. of students treated	37924	35355	8744	8672	17306	17235
completely						
No. of extractions-	9840	8632	2230	1616	351	648
deciduous						
No. of extractions-	Not relevant					
permanent						
No. of restorations-	24143	22434	6416	5559	1493	3614
temporary						
No. of restorations-	46988	47741	11723	13501	7409	10199
permanent						
No. of referrals to	4403	4130	1965	1075	682	542
hospitals						

Special Units

8.4.2 Mobile Dental Services

The Mobile Dental Unit was established in 2002 to provide satisfactory curative & preventive dental care for the people living in rural and suburban areas where accessibility to dental treatment is minimal.

The areas recognized as very difficult areas due to difficult geographical terrain, poor infrastructure facilities and low socioeconomic and education levels have led to high incidence of dental caries and periodontal disease. The Provincial Department of Health identified these factors and established the mobile dental unit to ensure dental services are brought closer to these populations who have no access to regular dental care.

The mobile dental services consist of a vehicle with fixed and portable dental chairs, essential dental instruments & material. The team consists of 5 personnel: two dental surgeons, a driver, driver's assistant and one minor staff. Services are provided on weekdays and Saturdays. The services are also provided on Sunday and public holidays, if requested by organizations, institution and societies etc.

The main services provided include education & motivation on oral hygiene, restoration of deciduous and permanent teeth, extraction, treatment for periodontal disease, dento-alveolar abscess, screening for pre-malignant lesions, diagnosis of oral carcinomas and proper referral for tertiary care.

Scene from Mobile Dental Unit





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Special Units

Table. 8.8. Summary of the Mobile Dental Clinics in 2006/2007

ACTIVITY	2006	2007	
EMERGENCY (a)Extractions : Deciduous	304	251	
Permanent : Caries	3,732	3056	
Periodontal	1,066	1980	
Other	286	198	
(b) D.A.A. Treated	358	157	
(c) Fractures Treated			
(d) Medico Legal			
(e) Post OP : Hemorrhage	24	05	
Infection	06	12	
ORAL MEDICINE (f)Realignment : Leukoplakia			
Other			
(g) Oral carcinoma			
(h) Candida Albicans			
(I) Restorations : Temporary	2,704	2827	

Permanent: Amalgam		
Composite		
Advanced Cons		
(J) Periodontal Treatment : Scaling	846	398
Surgery		
SURGERY		
(K) Incision & Drainage	193	80
(I) Impacted		
(m) Apicectomy		
(n) Fractures		
(o) Biopsies		
(p) Other	32	30
(q) Indoor		
(r) All Referrals	826	629
(s) Miscellaneous	2,182	180
(t) Prevention : Individual	5,478	930
Community	1,524	
First Visit	19,964	7785
Second Visit	1,118	2938
Total Attendance	21,182	10733

Estate Health

9 Estate Health Development

9.1 Background

The resident population on plantations in the Central Province constitutes 20% of the total population. Fifty three percent of the population in Nuwara Eliya lives on the plantations. 50% of plantation community in Sri Lanka lives in the Central Province. Estate population belongs to a different socio cultural background & has a lower literacy rate than the general population.

During the British Colonial period very basic curative health services was established in the estates in order to serve the labour population living on the estates and the estate management was held responsible for total health care of the resident populations.

In the early 90's the management of the state owned plantations was privatized while the government retained their ownership. This led to formation of Regional Plantation

Companies (RPC), which are private establishments. Plantation Housing & Social Welfare Trust (PHSWT) was established to coordinate the health & welfare activities of these RPC managed plantations. There are 196 such plantations in the Central Province with an approximate population of 500,000. The plantations which were not taken over by the RPC's were bought by individuals and goes as private holdings. There are approximately 232 such private holdings in the Province with an estimated population of 100,000.

There are 188 health institutions in the plantations in Central Province managed by RPC's. All preventive, Promotive & basic curative care is provided by the health staff on the plantations. The main problem in the plantation sector is the non availability of qualified staff to deliver the essential preventive & promotive health services and curative health services. Of the plantations managed by RPC's more than 50% have unqualified staff.

The Presidential Task Force that was appointed in mid 90's identified estate Health as a thrust area & a decision was taken to take over the estate hospitals with the objective of upgrading the quality of health services on the plantations. A very high level committee, "Estate Health Steering Committee" was established at provincial level in mid 90's in order to facilitate the take over of hospitals. This committee is chaired by the Chief Secretary of the Province and attended by the officers from Ministry of Health Colombo, Plantation Ministry, Ministry of Estate Infrastructure Development, PHDT, RPCs, Provincial Ministry of Health, Provincial Minister of Health & local politicians



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Estate Health

Even on the estates where there are qualified Public Health Midwives, the quality of care is very poor because the decision making regarding referrals & transfers of the maternity cases & children who need specialist care lies not with the Public Health Midwives, but with the medical personnel. Majority of the "medical personnel" employed on the estates are unqualified which has led to poor quality of the maternal & child care services and as a result the Central Province Records a higher Maternal mortality ratio & Infant mortality Rate in comparison to the rest of the country. In the year 2007, of the 26 reported maternal deaths in the Central Province, 13(50%) majority of which are preventable took place among women from plantation sector.

On several occasions integration of the estate health services into state health services & several other strategies were attempted with the objective of upgrading the health status of the plantation community.

Except for a few small private estates, the health status & the situation in the plantation sector is rarely considered by the Health Department in preparing its health plan & this has resulted in minimum involvement of Department of Health personnel in the delivery of these services on the plantations leading to poor quality services on the plantations. A high level policy decision at national level needs to be taken on the provision of curative care and preventive health services in the estate sector if equitable healthcare is to be provided for people living on estates.

9.2 Strengthening of Estate Preventive Health Services

Poor accessibility to quality of care in the antenatal and natal period and non availability of quality essential obstetric care services along with protocols has resulted in delay in transport of emergency patients to hospitals is one of the main causes for high maternal mortality in the estate sector.

There is no direct accountability by the Medical Officer of Health for the health of plantations and this has resulted in poor attention by them. Also the large populations and terrain of Medical Officer of Health areas which cover the plantation sector prevents (ex: Nuwaraeliya MOH area with 225,000) conducting routine clinics and supervision of preventive health activities on the plantations.

Medical officers of Health were conducting all Field ante natal clinics in the estate sector. Out reach well women clinics were conducted in all MOH areas by the public health staff. Special outreach clinics were conducted by the VOG from DGH Nuwaraeliya and DBH DickOya to selected hospitals in the Nuwaraeliya District.

As there were no public health midwives to provide services to some private establishments in Nuwaraeliya district, with help of the UNFPA provincial health department trained 25 health assistants during 2007 to provide health awareness on Reproductive health.

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Estate Health

Table -9.1 PHM availability in estate sector by PHDT region - 2007

Region	Number	Number	Qualified	Trained	Untrained
	available	vacant			
Nuwareliya	52	14	31	11	10

Hatton	52	-	22	21	9
Kandy	49	5	37	12	-
Total	153	19	90	44	19

Seventy four Government Public Health Midwives were appointed to private estates and vacant PHDT estates during the year 2007. This will strengthen the PHC in the most vulnerable populations within the estate sector. Most of the PHMM were provided with basic facilities like residential and office facilities by the estate management. At present the burning issue is absorption of the registered public health midwives to Government service which will help to improve the quality of the services provided by them.

The Provincial Health Department has already prepared a proposal to redemarcate the large MOH areas to a more mangable areas in 2008 while discussions have been held with the MoH and other relevant departments on the creation of posts, recruitment of the additional staff required to fill all vacancies of the PHC teams working in the estate areas.

9.3 Strengthening of Estate Curative care services

Overall Aim:

With the purpose of providing every citizen an equitable healthcare service, a proposal was brought forth by the Sri Lankan Government to take selected Estate Hospitals under the purview of the Government and to develop these hospitals to enable them to provide efficient and productive healthcare services to the people in that estates.

Specific Aims:

- 1. To develop 10 hospitals equipped with better facilities in the estate sector in the Central Province by year 2012
- 2. To provide a better and qualitative healthcare service to the 19.7% of estate population in the Central province.
- 3. To reduce the number of maternal deaths.
- 4. To reduce the number of infant deaths.

The Government has set a goal of converting 50 such estate hospitals to Divisional Hospital level by the year 2012 and activities to develop and upgrade these hospitals are already underway.

As its first phase, 22 estate hospitals have been taken under the administrative wing of the government out of which 10 hospitals are from the Central Province. Procedures have been set in motion to take over the rest of the 28 hospitals and the land.

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Development Projects

10. Development Projects-2007

For the development of health sector in Central Province, different types of sources of funds for capital expenditure were utilized during the year 2007. The major contributions for these were from Provincial Specific Development Grants (PSDG) and World Bank. The other sources included national plan of action for children, Criteria Based Grants, UNICEF and UNFPA projects.

Table (10.1):- Distribution of expenditure by Category of Development Projects – 2007 (RS. Million)

Expenditure Category	Approved Amount (Rs million)	Expenditure (as at December 31 st 2007)	Percentage %
Provincial Specific Development Grants (PSDG)	400.0	342.0	85%
World Bank (WB)	114.0	95.6	84%
Criteria Based Grants (CBG)	10.0	9.4	94%
National Plan of Action for Children	15.8	10.4	65%
UNICEF	12.4	12.4	100%
UNFPA	3.6	3.6	100%
Total	555.8	473.4	85.2%

10.1 Health Sector Development Project – World Bank –2007

Table (10.2):- Health Sector Development Project – World Bank –expenditure by districts 2007

	Kandy	Matale	N'Eliya
Approved Amount	41,114,765.00	33,471,065.00	33,716,500.00
(Rs)			
Actual Expenditure	35,458,616.00	33,471,065.00	24,870,793.32
(Rs)			
(2007/12/31)			
Progress (%)	86.24%	100%	73.76%

Table (10.3):- Summary of progress of the projects under WB – Central Province -2007

NO .OF. PROJECTS-UNDER THE WB						
	Kandy		Matale		N'Eliya	
	No. of.	Completed	No. of.	Completed	No. of.	Completed
	Projects	by	Projects	by	Projects	by
		31.12.2007		31.12.2007		31.12.2007
Constructions &	26	23	15	15	11	07
Repairs						
Provision of Surgical	14	12	13	13	10	08
Equipments						
Training Programmes	373	328	57	57	84	84
Other	06	06	08	08	06	06
Total	419	369	93	93	111	105

Matale district could finish all the project activities identified under WB project by the end of year 2007. The details of activities done under this project is described at annexure .

10.2 Health Sector Development Project – Provincial Specific Development Grants (PSDG) - 2007

Table (10.4):- PSDG financial Progress of Central Province during 2007

	CENTRAL PROVINCE	
Approved Amount (Rs)	400,000,000.00	
Actual Expenditure (Rs)	342,000,000.00	
(2007/12/31)		
Progress %	85%	

Table (10.5):- Summary of progress of the project activities done under PSDG project during 2007- Central province

	No. of. projects- Central province		
	No.of. Projects Completed		
Construction	12	08	
Repairs	05 05		
Total	17	13	

10.3 Health Sector Development Project- Criteria Based Grants (CBG) -2007

Table (10.6):- CBG- Progress

	CENTRAL PROVINCE	
Approved Amount (Rs)	10,000,000.00	
Actual Expenditure (Rs)	9,399,152.00	
(2007/12/31)		
Progress %	94%	

Table (10.7):- Summary of progress of the project activities done under CBG project during 2007- Central province

	No.of. projects- Central province		
	No.of. Projects Completed		
Repairs	19	19	
Provincial of Equipment	22	22	
Procument			
Other	01	01	
Total	32	32	

10.4 Health Sector Development Project -Children Action Plan – 2007

Table (10.8):- Children Action Plan financial Progress during 2007

	Kandy	Matale
Approved Amount (Rs)	9,000,000.00	6,872,500.00
Actual Expenditure (Rs)	5,095,439.14	5,276,715.82
(2007/12/31)		
Progress %	56.6%	76.8%

Table (10.9):- Summary of Project activities done under children action plan during 2007 – Central Province.

	Kandy	Completed	Matale	Completed
Construction	01	00	03	03
Repairs	14	12	05	05
Procument	-	-	03	03
Training	-	-	10	10
Other	-	-	01	01
Total	15	12	22	22

10.5 Health Sector Development Project- UNICEF-2007 – Nuwaraeliya district

Table (10.10):- UNICEF financial Progress during 2007

	Nuwara Eliya	
Approved Amount (Rs)	12,427,057.00	
Actual Expenditure (Rs)	12,427,057.00	
(2007/12/31)		
Progress %		

10.6 Health Sector Development Project- UNFPA -2007

Table (10.11):- UNFPA financial Progress during 2007

	Kandy	Matale	Nuwara Eliya
Approved Amount (Rs)	889,059.00	674,000.00	1,951,800.00
Actual Expenditure (Rs) (2007/12/31)	897,443.16	674,000.00	1,951,800.00
Progress %	100%	100%	100%

Development Projects

<u>District - Kandy</u>



<u>District - Matale -</u>



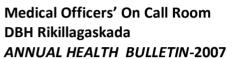
DH Ambagahapallassa MOH Office-Wattegama



Theatre Complex – DGH Matale CD Wewalwewa

<u>District -Nuwaraeliya -</u>







CD Kalaganwatta

Financial Management System

11. Financial Management system

11.1 Recurrent Expenditure Summery – 2007 *Table (11.1):-General administration*

Object	Title	Total Estimate	Total	Balance Rs
•			Expenditure	
561-1-1-1001	Salaries and Wages	69,185,000.00	68,719,060.81	465,939.19
1002	Overtime Holiday pay	13,340,000.00	12,856,274.77	483,725.23
1003	Other Allowances	3,042,000.00	2,889,220.23	152,779.77
1004	Interim Allowances	2,288,700.00	2,288,688.79	11.21
	Traveling Expenditure	6,510,000.00	6,445,874.81	64,125.19
1101	Stationary & Office Equipment	2,096,000.00	2,095,978.82	21.18
1201	Fuel and Lubricant	8,825,000.00	8,469,980.76	355,019.24
1202	Uniform	220,000.00	157,700.00	62,300.00
1203 1204	Diet	0.00	0.00	0.00
1204	Medical Supplies	0.00	0.00	0.00
1206	Mechanical & Electrical Equipment	235,000.00	168,135.00	66,865.00
1207	Other Supplies	555,000.00	433,654.00	121,346.00
1301	Vehicle	5,360,000.00	4,939,935.81	420,064.19
1301	Plant Machinery & Equipment	640,000.00	624,454.65	15,545.35
1303	Building & Structure	789,000.00	772,816.27	16,183.73
1304	Other Supplies	108,000.00	94,674.50	13,325.50
1401	Transport	76,000.00	70,953.37	5,046.63
1402	Telecommunication	2,639,000.00	2,451,536.38	187,463.62
1403	Postal Charges	557,000.00	538,981.00	18,019.00

	Total	120,955,700.00	118,281,605.39	2,674,094.61
1905	Holiday warrants Others	117,000.00 1,130,000.00	97,764.50 1,051,485.13	19,235.50 78,514.87
1903	Holidayyyarranta	117,000,00	07.764.50	10 225 50
1406 1407	Rates & Taxes Other Contractual Ser vices	283,000.00 1,281,000.00	276,130.75 1,253,542.95	6,869.25 27,457.05
1405	Rental & Hire Charge	500,000.00	481,391.40	18,608.60
1404	Electricity & water	1,179,000.00	1,103,370.69	75,629.31

Financial Management System

11.2 Patient Care Services

Table (11.2):- Patient Care Services

Object	Title	Total Estimate	Total Expenditure	Balance Rs
561-71-1-1001	Salaries and Wages	977,481,000.00	977,013,147.97	467,852.03
1002	Overtime Holiday pay	377,294,900.00	377,214,687.77	80,212.23
1003	Other Allowances	106,628,000.00	106,474,487.81	153,512.19
1004	Interim Allowances	24,993,100.00	24,993,061.25	38.75
1101	Traveling Expenditure	19,978,000.00	19,977,168.87	831.13
1201	Stationary & Office Equipment	2,199,000.00	2,139,750.56	59,249.44
1202	Fuel and Lubricant	23,050,000.00	22,327,547.93	722,452.07
1203	Uniform	1,600,000.00	1,572,076.00	27,924.00
1204	Diet	42,676,000.00	42,470,926.09	205,073.91
1205	Medical Supplies	3,609,000.00	3,608,440.40	559.60
1206	Mechanical & Electrical Equipment	937,000.00	912,036.80	24,963.20
1207	Other Supplies	9,298,000.00	9,023,436.52	274,563.48
1301	Vehicle	12,450,000.00	12,012,654.85	437,345.15
1302	Plant Machinery & Equipment	3,790,000.00	3,560,730.20	229,269.80
1303	Building & Structure	7,3000,000.00	7,218,634.56	81,365.44
1304	Other Supplies	336,000.00	264,977.30	71,022.70
1401	Transport	100,000.00	52,936.00	47,064.00
1402	Telecommunication	6,882,000.00	6,614,690.34	267,309.66
1403	Postal Charges	230,000.00	200,835.75	29,164.25

1404	Electricity & water	44,536,000.00	43,170,749.05	1,365,250.95
1405	Rental & Hire Charge	362,000.00	356,012.51	5,987.49
1406	Rates & Taxes	2,027,000.00	1,965,336.84	61,663.16
1407	Other Contractual Ser vices	13,520,700.00	13,413,967.65	106,732.35
1903	Holiday warrants	555,000.00	493,823.00	61,177.00
1905	Others	913,500.00	789,768.65	123,731.35
	Total	1,62,746,200.00	1,677,841,884.67	4,904,315.33

Financial Management System

11.3 Preventive Care Services

Table (11.3):- Preventive Care Services

Object	Title	Total Estimate	Total	Balance Rs
			Expenditure	
561-72-1-1001	Salaries and Wages	357,655,000.00	356,341,888.50	1,313,111.50
1002	Overtime Holiday pay	16,200,000.00	16,121,421.95	78,578.05
1003	Other Allowances	16,392,000.00	16,343,759.65	48,240.35
1004	Interim Allowances	16,453,900.00	16,453,837.87	62.13
1101	Traveling Expenditure	39,548,000.00	39,503,932.26	44,067.74
1201	Stationary & Office Equipment	1,090,000.00	1,048,763.91	41,236.09
1202	Fuel and Lubricant	9,483,000.00	9,207,232.33	275,767.67
1203	Uniform	970,000.00	915,983.50	54,016.50
1204	Diet	0.00	0.00	0.00
1205	Medical Supplies	50,000.00	3,132.00	6,868.00
1206	Mechanical & Electrical Equipment	161,000.00	114,708.00	46,292.00
1207	Other Supplies	2,160,000.00	2,069,043.31	90,956.69
1301	Vehicle	10,725,000.00	10,417,383.42	307,616.58
1302	Plant Machinery & Equipment	335,000.00	317,472.57	17,527.43
1303	Building & Structure	3,080,000.00	3,030,868.07	49,131.93
1304	Other Supplies	98,000.00	83,189.10	14,810.90

1401	Transport	3,900,000.00	3,718,827.33	181,172.67
1402	Telecommunication	1,850,000.00	1,701,480.79	148,519.21
1403	Postal Charges	220,000.00	136,519.15	83,480.85
1404	Electricity & water	2,650,000.00	2,563,077.12	86,922.88
1405	Rental & Hire Charge	9,000.00	8,342.32	657.68
1406	Rates & Taxes	110,000.00	31,011.40	78,988.60
1407	Other Contractual Ser vices	440,000.00	431,726.50	8,273.50
1903	Holiday warrants	195,000.00	137,747.00	57,253.00
1905	Others	465,000.00	411,694.00	53,306.00
	Total	484,239,900.00	481,153,042.05	3,086,857.95

Financial Management System

11.4 Summary of Health expenditure by Programmes

Table(11.4):- Summary of Health expenditure by Programmes

	Programme	Total expenditure Rs	
		2006	2007
Recurrent	General Administration	113,746,626.00	118,281,605.39
Expenditure	Patient care services Community Health	1,521,255,891.00	1,677,842,884.67
	services	462,852,047.00	481,153,042.05
	Total	2,097,854,564.00	2,277,277,532.11

There is a 7.8 % increase of recurrent expenditure observed during year 2007, compared to 2006 in the central provincial health department

Detailed

Tables

Table (1):- Number of Health Institutions and Field Areas in Kandy District (under Central Province Health department) in 2007

No	DDHS Areas	No of PHI Areas	No of PHM Areas	No of District General Hospitals	No of District Base Hospitals	No of Divisional Hospitals	No of Primary Medical Care Unit
1	Akurana	03	18	-	-	01	03
2	Galagedara	03	15	-	-	01	01
3	Gangalhala	03	20	-	-	03	-
4	Hatharaliyadde	02	13	-	-	02	02
5	GangawataKorale	02	17	-	-	01	02
6	Hasalaka	03	18	-	-	06	-
7	Kundasale	04	30	-	-	04	01
8	Medadumbara	04	24	-	-	03	02
9	Nawalapitiya	03	18	01	-	-	01
10	Panvila	02	17	-	-	01	-
11	Poojapitiya	04	22	-	-	02	04
12	Thalathuoya	03	23	-	-	03	01
13	Udadumbara	02	13	-	-	01	-
14	Gampola	05	30	-	-	02	01
15	Udunuwara	05	34	-	-	05	02
16	Wattegama	04	30	-	-	02	02
17	Warallagama	06	25	-	-	02	01
18	Yatinuwara	05	36	-	-	03	03
19	Doluwa	04	16	-	-	03	01
20	Deltota	02	08	-	-	03	00
	Total	69	427	1	-	48	27

- ➤ Kandy Municipal Council comes under Local government.
- T.H. Kandy, T.H. Peradeniya, Sirimawo Bandaranayaka Childrens Hospital & B.H. Gampola come under Line Ministry
- > DH Teldeniya is proposed to be upgrated as DBH. It is included in this Summary as a DH as this hospital has not provided any secondary care during 2006.

Table (2):- Number of Health Institutions and Field Areas in Nuwaraeliya District (under Central Province Health department) in 2007

	Name of DDHS Areas	No. of PHI Areas	No. of PHM Areas	No of District General Hospitals	No of District Base Hospitals	No of Divisional Hospitals	No of Primary Medical Care Unit
1	NuwaraEliya	03	15	-	-	00	03
2	Kothmale	05	37	-	-	03	06
3	Maskeliya	05	06	-	01	03	01
4	Rikillagaskada	05	45	-	01	05	02
5	Thalawakele	04	60	-	-	04	00
6	Ambagamuwa	06	26	-	-	04	02
7	walapane	05	45	-	-	03	08
	Total	33	234	-	02	22	22

- > DGH Nuwaraeliya comes under Line Ministry
- ➤ DBH Dickoya & DBH Rikillagaskada are proposed to be upgraded as DBH. They are included in this Summary as DH as these hospitals have not provided any secondary care during 2007.

Table (3):- Number of Health Institutions and Field Areas in Matale District (under Central Province Health department) in 2007

	Name of DDHS Areas	No.of PHI area	No.of PHM area	No of District General Hospitals	No of District Base Hospitals	No of Divisional Hospitals	No of Primary Medical Care Unit
1	Matale	02	10	01	-	-	02
2	Rattota	03	15	-	-	02	02
3	Galewela	04	24	-	-	02	03
4	Dambulla	03	21	-	01	02	02
5	Naula	02	11	-	-	02	01
6	Laggala Pallegama	02	07	-	-	03	-
7	Yatawatte	02	10	-	-	01	01
8	Ukuwela	04	20	-	-	02	02
9	Pallepola	02	10	-	-	-	02
10	Wilgamuwa	02	10	-	-	03	-
	Total	26	138	01	01	17	15

- ➤ Matale Municipal Council comes under Local government.
- > DH Hettipola is proposed to be upgraded as DBH. It is included in this Summary as a DH as this hospital has not provided any secondary care during 2006.

Table (4):- Curative Care Institutions in central province - 2007.

CATEGORY	KANDY	MATALE	NUWARAELIYA
PRIMARY			
	DH AKURANA	DH GALEWELA	DH AGARAPATHANA
Care	DH ANKUMBURA	DH RATTOTA	DH BOGAWANTHALAWA
	DH DELTOTA	DH LAGGALA PALLEGAMA	
			DH NILDANDAHINNA
	DH DOLOSBAGE	DH NALANDA	DH KOTAGALA
	DH GALAGEDARA	DH MADIPOLA	DH LINDULA
	DH KADUGANNAWA	DH HETTIPOLA	DH MASKELIYA
	DH MADOLKELE	DH KONGAHAWELA	DH MATURATA
	DH MAMPITIYA	DH MUWANDENIYA	DH UDAPUSSALLAWA
	DH MENIKHINNA	DH YATAWATTE	DH WALAPANE
	DH PUSSALLAWA	DH HADUNGAMUWA	
	DH UDADUMBARA	DH OVILIKANDA	DH MALDENIYA
	DH KATUGASTOTA	DH LENADORA	DH WATAWALA
	DH WATTEGAMA	DH MARAKA	DH KOTHMALE
	DH SANGARAJAPURA	DH HATTOTA AMUNA	DH GINIGATHHENA
	DH MEDAWALA	DH GAMMADUWA	DH LAXAPANA
	DH MINIPE	DH ILUKKUMBURA	DH HIGH FOREST
	DH PANVILATENNA	DH SIGIRIYA	DH GONAPITIYA

i	i	
DH MARASSANA	PMCU ALUVIHARE	DH N/ MEDAKUMBURA
DH HASALAKA	PMCU DULLEWA	DH DAYAGAMA
DH TITHTHAPAJJALA	PMCU ELKADUWA	DH GONAGANTENNA
DH WATTAPPOLA	PMCU KALUNDEWA	DH HANGURANKETHE
DH KOTALIGODA	PMCU ALUTHWEWA	DH MOOLOYA
DH PAMUNUWA	PMCU MADAWALA ULPATHE	DH THERIPAHA
DH GELIOYA	PMCU OPALGALA	PMCU AMBEWELA
DH BAMBARADENIYA	PMCU PALDENIYA	PMCU HATTON
DH HATHARALIYADDA	PMCU PALLEPOLA	PMCU HANGARAPITIYA
DH THALATHUOYA	PMCU WAHAKOTTE	PMCU KANDAPOLA
DH UDUWELA	PMCU WAWALAWEWA	PMCU KURUPANAWELA
DH GALAHA	PMCU UKUWELA	PMCU KEERTHIBANDARAPURA
DH YAKGAHAPITIYA	PMCU GURUBABILA	PMCU KATABULAWA
DH NARAMPANAWA	PMCU DEWAHUWA	PMCU KALAGANWATTE
DH GALPIHILLA	PMCU KANDENUWARA	PMCU MADULLA
DH JAMBUGAHAPITIYA		PMCU MUNWATTE
DH KURUDUWATTE		PMCU MANAKOLA
DH KAHAWATTE		PMCU MASWELA
DH UDAGAMA ATABAGE		PMCU NAWATHISPANE
DH BATUMULLA		PMCU WIDULIPURA
DH MEDAMAHANUWARA		PMCU NANUOYA
DH AMBAGAHAPALASSA		PMCU PUNDALUOYA
DH KOLONGODA		PMCU RAGALA
DH MORAHENA		PMCU RUPAHA
DH BOKKAWALA		PMCU UPKOT
DH DUNHINNA		PMCU WIJEBAHUKANDA
DH THELDENIYA		PMCU HAPUGASTHALAWA
DH ULAPANE		PMCU MANDARANNUWARA
DH MURUTHALAWA		
DH PATTIYAGAMA PALLEGAMA		
1		

	Kandy	Matale	N' Eliya
PRIMARY CARE	PMCU ALAWATHUGODA PMCU KURUGODA PMCU KURUGODA PMCU MAHAKANDA PMCU MAILAPITIYA PMCU MAKULDENIYA PMCU MADAWALA BAZAR PMCU MAWATHURA PMCU POOJAPITIYA PMCU RAMBUKEELA PMCU RAJAWALLA PMCU RAMBUKEWELA PMCU SUDUHUMPOLA PMCU WELAMBODA PMCU YAHALATENNA	Matale	N' Eliya
	PMCU YAHALATENNA PMCU KOTIKAMBE PMCU UDATHALAWINNA		

	PMCU SANDASIRIDUNUVILA PMCU ELAMALDENIYA PMCU MAPAKANDA PMCU BALANA PMCU DODAMWELA PMCU DEDUNUPITIYA PMCU GIRIHAGAMA PMCU GODAHENA PMCU GALHINNA PMCU GOHAGODA PMCU MEEMURE		
Secondary care institutions	DGH NAWALAPITIYA DBH GAMPOLA	DGH MATALE DBH DAMBULLA	DGH NUWARAELIYA DBH DICKOYA DBH RIKILLAGASKADA
Tertiary care institutions	TH KANDY TH PERADENIYA SIRIMAWO BANDARANAYAKE CHILDRENS HOSPITAL		

DH Teldeniya and DH Hettipola are proposed to upgrade as District Base Hospitals. However, these hospitals are considered as only primary care units (Divisional Hospitals) in this bulletin as there were no secondary units or other basic facilities to be considered as base hospitals.

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Organization of Health Services

Table. (5) -: Special units

	Kandy	Matale	N' Eliya
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Special Units	CHEST CLINIC DRUG STORES KANDY A.M.C KANDY SISILA MENTAL HEALTH DELTOTA SCHOOL MEDICAL OFFICE STD CLINIC KANDY DIGANA REHABILITATION MENTAL HEALTH KATUGASTOTA	CHEST CLINIC DRUG STORES MATALE A.M.C MATALE MENTAL REHABILITATION CENTRE LALIABE STD CLINIC-MATALE	CHEST CLINIC DRUG STORES N'ELIYA STD CLINIC-N'ELIYA
	MENTAL HEALTH KATUGASTOTA TRAINING CENTER KADUGANNAWA B.M.E.S UNIT WATAPULUWA		

Curative Care Services

Table. (6) Information of primary care institutions- Kandy/Matale/NuwaraEliya

Information of primary care institutions in kandy district – 2007

injormation of primary o	ui e ilistitu	LIUIIS III K	undy distric	2007							
INSTITUTIONS	NO. OF BEDS	NO. OF WARDS	BED OCCUPANCY RATE (%)	ADMISSIONS	OPD ATTENDANCE	TOTAL IN PATIENT DAYS PER YEAR	NO. OF CLINICS HELD	CLINIC ATTENDANCE	TOTAL NO. OF DEATHS	TOLAL NO.OF DELIVERIES	TOTAL NO.OF. PATIENT TRANSFERS FROM THE INSTITUTION
DH-ANKUMBURA	66	06	48.29	4606	45302	11633	104	13537	20	174	475
DH-PUSSALLAWA	65	05	34.91	4128	35109	8283	150	13893	13	196	1221
DH-DOLOSBAGE	50	03	18.87	1440	24960	3443	196	5511	03	61	325
DH-DELTHOTA	64	04	37.48	3875	41542	8873	302	10644	12	212	744
DH-MADOLKELE	81	05	38.22	4826	43449	11301	50	3842	29	226	1040
DH-THELDENIYA	116	07	31.77	6993	77172	13452	582	36486	01	173	1211
DH-GALAGEDARA	71	05	36.31	5931	73365	9410	379	14629	12	98	989
DH-UDADUMBARA	89	04	25.17	4344	47366	8176	305	15451	12	107	1184
DH-MENIKHINNA	74	06	41.28	6216	67420	11151	610	29827	18	107	871
DH-AKURANA	88	06	60.39	6119	98775	19397	105	16278	16	243	596
DH-KADUGANNAWA	72	05	40.53	4973	66958	10651	572	28412	13	38	560
DH-MAMPITIYA	56	04	31.37	3204	42207	6411	277	8880	03	02	254
DH-KATUGASTOTA	54	05	48.89	6001	88618	9635	539	21784	17	71	435
DH-WATTEGAMA	59	05	36.62	3673	47707	7886	138	9381	04	49	718
DH SANGARAJAPURA	34	03	24.92	1326	24266	3093	98	4658	00	04	200
DH-MEDAWALA	44	05	49.83	2856	44681	8002	124	12141	05	11	489
DH-MINIPE	40	04	14.12	1525	27706	2062	378	9176	01	06	217
DH-MARASSANA	56	04	56.30	4766	39134	11507	80	10836	13	69	531

DH-PANWILATHENNA	30	04	37.94	1379	26371	4154	127	5928	03	03	144
DH-HASALAKA	50	04	65.32	5211	59081	11920	88	7208	05	97	1211
INSTITUTIONS	NO. OF BEDS	NO. OF WARDS	BED OCCUPANCY RATE(%)	ADMISSIONS	OPD ATTENDANCE	TOTAL IN PATIENT DAYS PER YEAR	NO. OF CLINIC HELD	CLINIC ATTENDANCE	TOTAL NO. OF DEATHS	TOLAL NO.OF DELIVERIES	TOTAL NO.OF. PATIENT TRANSFERS FROM THE INSTITUTION
DH-THITTAPAJJALA	54	04	46.38	3840	70619	9142	512	23924	15	50	491
DH-JAMBUGAHAPITIYA	25	03	39.86	1407	23002	3637	240	4062	00	02	292
DH-WATTAPPOLA	17	03	34.49	839	17300	2140	53	4141	01	00	112
DH-KOTALIGODA	35	05	65.22	3565	35546	8332	196	10466	02	20	472
DH-PAMUNUWA	33	03	18.89	957	28503	2275	195	8614	00	01	95
DH-GELIOYA	22	03	49.46	1391	30680	3972	149	11492	05	00	117
DH-BAMBARADENIYA	37	03	41.58	2968	38850	5615	318	14175	02	07	363
DH-HATHARALIYADDA	48	04	34.59	3442	32621	6060	96	8780	05	29	519
DH-THALATUOYA	28	03	58.27	3141	53029	5955	107	14718	18	20	484
DH-UDUWELA	25	03	38.45	2248	40471	3509	305	6019	01	11	368
DH-GALAHA	42	03	32.17	2502	34528	4932	133	10312	05	50	201
DH-YAKGAHAPITIYA	26	03	36.69	1413	45633	3482	533	18980	03	09	207
DH-NARAMPANAWA	32	03	30.92	922	20364	3611	109	4643	00	02	96
DH-GALPIHILLA	22	03	44.20	1513	30225	3549	125	6882	01	34	229

INSTITUTIONS	NO. OF BEDS	NO. OF WARDS	BED OCCUPANCY RATE(%)	ADMISSIONS	OPD ATTENDANCE	TOTAL IN PATIENT DAYS PER YEAR	NO. OF CLINIC HELD	CLINIC ATTENDANCE	TOTAL NO. OF DEATHS	TOLAL NO.OF DELIVERIES	TOTAL NO.OF. PATIENT TRANSFERS FROM THE INSTITUTION
DH-KURUNDUWATTHA	36	03	61.84	2581	49634	8126	250	7300	03	69	298
DH-KAHAWATTHA	24	02	4.62	152	29955	405	128	4010	00	00	04
DH-UDAGAMA ATABAGE	23	03	25.35	826	27005	2128	132	9075	03	01	49
DH-MORAHENA	24	02	27.45	1209	13257	2405	143	4137	00	00	24
DH-BATUMULLA	32	03	13.22	384	11513	1544	99	1881	00	02	44
DH-MADAMAHANUWARA	32	04	17.32	1741	27970	2023	100	4526	02	57	398

Curativ e Care Services

TOTAL	2097	181	39.15	134575	1927646	299666	10012	504035	282	2446	20002
PRISON HOSPITAL PALLEKALE	00	00	00	00	23504	00	00	00	00	00	00
PRISON HOSPITAL KANDY	50	04	62.39	1901	35653	11386	102	1391	02	00	239
DH-PATTIYAGAMA PALLEGAMA	12	02	18.49	657	21718	810	54	1921	00	00	09
DH-MURUTHALAWA	14	02	53.84	1938	33840	2751	96	5806	01	00	57
DH-ULAPANE	12	02	100.37	1275	21148	4834	144	6432	02	00	139
DH-DUNHINNA	17	03	22.87	727	17307	1419	99	4562	02	01	54
DH-BOKKAWALA	35	03	74.00	3053	32835	9453	188	17193	05	30	651
DH-KOLONGODA	44	04	20.45	3003	35365	3285	104	4839	00	74	391
DH-AMBAGAHAPELASSA	37	04	18.11	1578	24382	2446	98	5248	04	30	184

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INSTITUTIONS	NO. OF BEDS	NO. OF WARDS	BED OCCUPANCY RATE (%)	ADMISSION	OPD ATTENDANCE	TOTAL INPATIENT DAYS PER YEAR	NO. OF CLINICS HELD	CLINIC	TOTAL NO OF DEATHS	TOTAL NO.OF DELIVERIES	TOTAL NO.OF. PATIENT TRANSFERS FROM THE INSTITUTION
DBH-HETTIPOLA	52	05	63.62	4014	43555	12075	120	4226	12	108	475
DH- RATTOTA	73	04	81.08	4498	77701	21605	570	15796	08	66	354
DH-LAGGALA/PALLEGAMA	67	04	22.71	2571	25614	5553	491	7507	05	22	420
DH-GALEWELA	85	05	35.45	6851	113493	10997	484	25036	28	287	830
DH-NALANDA	45	04	37.01	2982	36798	6079	404	11575	08	66	120
DH-MADIPOLA	57	03	98.29	5160	34330	20450	170	11213	09	43	355
DH-KONGAHAWELA	57	06	29.70	2486	30838	6180	211	16026	07	71	285
DH-ILLUKKUMBURA	07	02	16.40	193	6526	419	93	2160	01	00	28
DH-YATAWATTE	57	03	16.67	1476	40295	3468	432	12674	08	27	136
DH-HADUNGAMUWA	18	03	49.41	1590	23756	3246	80	4810	02	18	103
DH-MARAKA	11	02	7.20	231	16187	289	78	2480	00	00	05
DH-GAMMADUWA	05	02	18.25	252	8724	333	60	762	00	00	01
DH-LENADORA	11	02	72.73	1445	22340	2920	106	4461	01	00	72
DH-OVILKANDA	19	03	3.75	210	5634	260	78	2442	00	00	16
DH-HATTOTA AMUNA	18	03	18.93	1197	10912	1244	79	2258	03	06	227
DH-MUWANDENIYA	16	02	6.46	278	14594	377	168	4154	00	00	05
DH-SIGIRIYA	14	02	48.20	1595	22715	2463	242	5884	03	00	239
DH- LALIAMBE	10	02	49.73	31	10710	1815	144	3584	00	00	00
TOTAL	622	57	43.95	37060	544722	99773	4010	137048	95	714	3671

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INSTITUTIONS	NO. OF BEDS	NO. OF WARDS	BED OCCUPANCY RATE (%)	ADMISSIONS	OPD ATTENDANCE	TOTAL PATIENT DAYS PER YEAR	NO. OF CLINICS HELD	CLINIC ATTENDANCE	TOTAL NO OF DEATHS	TOTAL NO.OF DELIVERIES	TOTAL NO.OF. PATIENT TRANSFERS FROM THE INSTITUTION
DH- LINDULA	85	06	53.08	5670	30046	16469	96	5462	25	595	1232
DH-KOTAGALA	80	05	21.80	3525	33444	6365	131	7603	16	408	642
DH-AGARAPATHANA	40	03	43.60	3390	28001	5240	419	9651	16	290	986
DH-WALAPANE	126	07	21.03	3580	4205	9670	154	6205	04	97	529
DH-UDUDPUSSELLAWA	89	08	22.23	2905	18731	7220	76	3349	23	168	663
DH-MATHURATA	86	07	32.60	3411	37032	10233	401	13642	03	115	356
DH-KOTHMALE	52	04	44.11	3812	29937	8372	453	10798	07	89	701
DH-MALDENIYA	58	06	19.43	1723	22678	4114	329	8160	05	36	362
DH-MASKELIYA	188	06	22.04	6520	34122	15123	208	6482	23	957	593
DH-BOGAWANTHALAWA	72	04	57.91	6725	50581	15219	192	11241	29	385	882
DH-WATAWALA	49	05	37.22	2936	36393	6656	179	6239	05	195	520
DH-GINIGATHHENA	56	04	36.26	2675	40229	7411	440	10838	04	83	428
DH-LAXAPANA	32	03	80.42	3587	17839	9393	124	7528	05	32	96
DH-HANGURANKETHA	23	03	54.46	3182	40612	4572	417	14934	08	11	392
DH-GONAGANTHENNA	21	03	34.05	1965	19543	2610	94	6602	06	69	276
DH-GONAPITIYA	28	03	13.32	664	10585	1361	72	1448	04	42	156
DH-MULOYA	23	04	45.29	1557	14155	3802	84	2650	05	40	261
DH-N/MEDAKUMBURA	17	03	27.04	1477	8353	1678	125	2282	02	14	211
DH-DAYAGAMA	26	03	72.92	3287	16426	6920	137	4590	12	181	366
DH-HIGH FOREST	32	03	43.80	1416	26087	5116	76	6080	03	65	266
DH-THERIPEHE	08	02	9.42	157	13615	275	90	2754	00	06	68
DH- NILDANDAHINNA	12	02	41.74	1594	49186	1828	514	3952	04	90	356
TOTAL	120 3	94	34.08	65758	581800	149647	4811	152490	209	3971	10342

Table. (7) OPD ATTENDANCE OF PRIMERY MEDICAL CARE UNIT (PMCU) IN CENTRAL PROVINCE - 2007

Kandy		Matale	9	N'Eliya	
INSTITUTIONS	OPD ATTENDANCE	INSTITUTIONS	OPD ATTENDANCE	INSTITUTIONS	OPD ATTENDANCE
PMCU-DEDUNUPITIYA	14441	PMCU-ALUVIHARE	16793	PMCU-RAGALA	18755
PMCU-KOTIKAMBE	12768	PMCU-DULLEWA	7370	PMCU-RUPAHA	6221
PMCU-GIRIHAGAMA	20543	PMCU-ELKADUWA	6099	PMCU-KEERTHIBANDARAPURA	12023
PMCU-SANDASIRIDUNUWILA	13136	PMCU-ALUTWEWA	17300	PMCU-KURUPANAWELA	1825
PMCU-MAKULDENIYA	12963	PMCU-MADAWALA-ULPATA	15976	PMCU MANDARANNUWARA	17190
PMCU-DODAMWELA	19610	PMCU-OPALGALA	5113	PMCU-MADULLA	16412
PMCU-BALANA THEPALPOLAWATTHA	11820	PMCU- PALDENIYA	5843	PMCU-KALAGANWATTHA	6160
PMCU- YAHALATHENNA	9607	PMCU -PALLEPOLA	23696	PMCU-MUNWATTHA	7455
PMCU-MAILAPITIYA	20909	PMCU-WAHAKOTTE	8963	PMCU-MANAKOLA	11886
PMCU-UDATHALAWINNA	15622	PMCU-WAWALA WAWA	7156	PMCU-KANDAPOLA	18131
PMCU-ELAMALDENIYA	17310	PMCU-UKUWELA	40636	PMCU-NANUOYA	10557
PMCU-RAJAWELLA	15053	PMCU-GURUBABILA	9302	PMCU-AMBEWELA	5130
PMCU-SUDUHUMPOLA	30449	PMCU-DEWAHUWA	23901	PMCU-HAPUGASTHALAWA	29750
PMCU-MAWATHURA	6301	PMCU-KALUNDEWA	7115	PMCU-PUNDALUOYA	14678
PMCU-KURUGODA	12744	PMCU- KANDENUWARA	12012	PMCU-KATABULA	6904
PMCU-RAMBUKEWELA	8559			PMCU-MASWELA	10110
PMCU-ALAWATHUGODA	9413			PMCU-WIJEBAHUKANDA	8513
PMCU-GOHAGODA	28425			PMCU-NAWATHISPANE	6877
PMCU-MAHAKANDA	14509			PMCU-HATTON	9658

PMCU-GALHINNA	17700		PMCU-HANGARAPITIYA	4655
PMCU-WELAMBODA	13411		PMCU-WIDULIPURA	9669
PMCU-RAMBUKE ELA	7442		PMCU-UPCOT	7500
PMCU-GODAHENA	10329			
PMCU-POOJAPITIYA	15992			
PMCU – MAPAKANDA	5566			
PMCU-KALUGAMUWA	15833			
PMCU-MEMURE	3016			
PMCU-MADAWALA BAZAR	19695			
TOTAL	403166	207275		240059

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Table 8) Detailed summary of wards and beds of secondary care institutions under Central provincial Health department.

	DGH	Matale		GH apitiya	DBH Dambulla	
	Wards	Beds	Wards	Beds	Wards	Beds
Medical wards (Male)	02	117	02	55	01	38
Medical wards (Female)	02	64	02	42	01	22
Surgical wards (Male)	02	72	02	76	01	25
Surgical Wards(Female)	02	55	01	43	01	17
Maternity Wards	03	122	02	68	01	35
Labor Rooms	01	09	01	07	01	05
Gynecology wards	01	47	01	23	01	13
Pediatric Wards	01	19	02	64	01	28
PBU	01	19	01	18	01	15
Eye Wards	01	29	02	39	01	16
ENT Wards	01	15	-	-	-	-
Skin wards	01	21	-	-	-	-
TB wards	01	38	-	-	-	-
Priest Wards	01	05	01	07	01	04
ICU	01	07	01	04	-	-
ETU			01	03	01	02
Total	21	639	19	449	12	220

Table 9 Leading causes of Hospital deaths for the year 2006 in Kandy District

Disease Code	Diseases and ICD Code	Number	Rank
(IMMR Code)			
245	Undiagnosed / Uncoded	466	1
134	Cerebroavascular disease (160-169)	317	2
219	Ill-defined and unknown causes of		3
	mortality (R95-R99)	235	
128	Acute myocardial infarction (I21,I22)	233	4
129	Other ischaemic heart disease (I20,I23-I25)	161	5
177	Renal failure (N17-N19)	134	6
149	Bronchitis, emphysema and other chronic		7
	obstructive pulmonary disease (J40-J44)	124	
132	Heart failure (I50)	123	8
145	Pneumonia (J12-J18)	116	9
133	Other heart diseases (127.0-127.8, 128-		10
	149,151)	89	
022	Septicaemia (A40,A41)	85	11
199	Slow fetal growth, fetal malnutrition and		12
	disorders related to short gestation and low		
	birth weight (P05-P07)	80	
235	Toxic effects of organophosphate and		13
	carbamate insecticides (T60.0)	61	
051	Malaignant neoplasm of oesophagus (C15)	58	14
125	Essential hypertension (I10)	56	15
163	Other diseases of liver (K71-K76)	56	15

Table 10. Leading causes of Hospital deaths for the year 2006 in Matale District

	Diseases and ICD Code	Number	Rank
Diseases			
Code			
(IMMR			
Code)		_	
128	Acute myocardial infarction (I21,I22)	49	1
132	Heart failure (I50)	48	2
134	Cerebroavascular disease (160-169)	47	3
133	Other heart diseases (I27.0-I27.8, I28-		4
	149,151)	46	
149	Bronchitis, emphysema and other		5
	chronic obstructive pulmonary disease		
	(J40-J44)	45	
236	Toxic effects of other pesticides (T60.1-		6
	T60.9)	33	
129	Other ischaemic heart disease (I20,I23-		7
	125)	29	
145	Pneumonia (J12-J18)	25	8
125	Essential hypertension (I10)	23	9
150	Asthma (J45-J46)	22	10
022	Septicaemia (A40,A41)	19	11
235	Toxic effects of organophosphate and		12
	carbamate insecticides (T60.0)	17	
238	Toxic effects of other substances chiefly		13
	non medicinal as to source (T51-		
	T59,T61,T62,T63.1-T63.9,T64,T65)	12	
177	Renal failure (N17-N19)	10	14
219	III-defined and unknown causes of		
	mortality (R95-R99)	10	14

Table 11 Leading causes of Hospital deaths for the year 2006 in NuwaraEliya District

IMMR	Diseases	Number	Rank
Code			
128	Acute myocardial infarction (I21,I22)	43	1
134	Cerebroavascular disease (I60-I69)	40	2
235	Toxic effects of organophosphate and		
	carbamate insecticides (T60.0)	37	3
132	Heart failure (I50)	36	4
133	Other heart diseases (127.0-127.8, 128-		
	149,151)	33	5
199	Slow fetal growth, fetal malnutrition and		
	disorders related to short gestation and		
	low birth weight (P05-P07)	30	6
150	Asthma (J45-J46)	27	7
233	All other burns and corrosions (T20-		
	T25,T27-T32)	21	8
129	Other ischaemic heart disease (I20,I23-		
	125)	17	9
203	Other conditions originating in the		
	perinatal period (P08,P29,P35.1-P39,P50-		
	P54,P56-P96)	17	9
145	Pneumonia (J12-J18)	16	10
149	Bronchitis, emphysema and other chronic		
	obstructive pulmonary disease (J40-J44)	14	11
198	Fetus and newborn affected by maternal		
	factors and by complications of		
	pregnancy, labour and delivery (P00-P04)	12	12
126	Hypertensive heart disease (I11)	11	13
131	Cor pulmonale (I27.9)	11	13
177	Renal failure (N17-N19)	11	13

Table 12 Leading causes of live Discharges for the year 2006 in Kandy District

Diseases Code (IMMR Code)	Diseases and ICD code	Number	Rank
243	Persons encountering health services for examination, investigation and for specific procedures of health care (Z00-Z13,Z40-Z54)	24,068	1
195	Single spontaneous delivery (O80)	21,258	2
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	20,002	3
245	Undiagnosed / Uncoded	18,123	4
150	Asthma (J45-J46)	14,510	5
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	13,280	6
217	Other signs and symptoms and abnormal clinical findings (R25-R49,R52,R53,R55,R57-R69)	12,650	7
227	Open wounds and injuries to blood vessels (S01,S11,S15,S21,S25,S31,S35,S41,S45, S51, S55,S61,S65,S71,S75,S81,S85,S91,S95,T01,T0 6.3,T09.1,T11.1,T11.4,T13.1, T13.4, T14.1, T14.5)	10,987	8
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	10,177	9
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0,T14.0)	9,972	10

125	Essential hypertension (I10)	9,052	11
230	Other injuries of specified, unspecified and		12
	multiple body regions		
	(\$09,\$16,\$19,\$29,\$39,\$46,\$49,\$56,		
	S59,S66,S69,S76,S79,		
	86,S89,S96,S99,T06.0,T06.1,T06.4-T06.8,		
	T07,T09.3-T09.5,T09.8,T09.9,T11.5,		
	T11.8,T11.9,T13.5,T13.8,T13.9,		
	T14.6,T14.8,T14.9)	8,523	
115	Cataract and other disorders of lens (H25-		13
	H27)	8,449	
156	Gastritis and duodenitis (K29)	8,093	14
152	Other diseases of the respiratory		15
	system(J22,J60-J98)	7,986	

Morbidity and Mortality

Table 13 Leading causes of live Discharges for the year 2006 in Matale District

IMMR	Diseases and ICD code	Number	Rank
Code			
195	Single spontaneous delivery (O80)	6,447	1
227	Open wounds and injuries to blood vessels		
	(\$01,\$11,\$15,\$21,\$25,\$31,\$35,\$41,\$45,\$51,		
	S55,S61,S65,S71,S75,S81,S85,S91,S95,T01,T06.3,T09.1,T11.1,T11.4,T13.1,		
	T13.4, T14.1, T14.5)	5,884	2
042	Other viral diseases (includes viral fever) (A81, A88, A89, B00, B03, B04, B07-		
	09,B25,B27-B34)	5,095	3
150	Asthma (J45-J46)	4,789	4
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90,		
	T00,T09.0,T11.0,T13.0,T14.0)	4,274	5
196	Other complications of pregnancy and delivery (020-029,060-063,067-		
	071,073-075,081-084)	3,329	6
156	Gastritis and duodenitis (K29)	3,295	7
243	Persons encountering health services for examination, investigation and		
	for specific procedures of health care (Z00-Z13,Z40-Z54)	3,094	8
186	Other disorders of the female genito-urinary system (N71-N80,N82-		
	N98,N99.2,N99.3)	3,081	9
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	3,025	10

143	Other acute upper respiratory infections (J00,J02,J04-J06)	2,990	11
245	Undiagnosed / Uncoded	2,856	12
229	Bitten or struck by dog (W54)	2,688	13
230	Other injuries of specified, unspecified and multiple body regions		
	(\$09,\$16,\$19,\$29,\$39,\$46,\$49,\$56,\$59,\$66,\$69,\$76,\$79,		
	86,S89,S96,S99,T06.0,T06.1,T06.4-T06.8, T07,T09.3-		
	TO9.5,T09.8,T09.9,T11.5, T11.8,T11.9,T13.5,T13.8,T13.9,		
	T14.6,T14.8,T14.9)	2,631	14
211	Symptoms and signs involving the digestive system and abdomen (R10-		
	R19)	2,605	15
119	Other diseases of the eye and adnexa (H00-		
	H11,H20,H21,H30,H31,H34,H35,H43-H47,H51-H59)	2,557	16

Morbidity and Mortality

Table 14 . Leading causes of live Discharges for the year 2006 in NuwaraEliya District

IMMR	Diseases and ICD code	Number	Rank
Code			
195	Single spontaneous delivery (O80)	7,769	1
245	Undiagnosed / Uncoded	5,945	2
042	Other viral diseases (includes viral fever) (A81, A88, A89, B00, B03, B04, B07-		3
	09,B25,B27-B34)	3,531	
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90,		4
	T00,T09.0,T11.0,T13.0,T14.0)	3,266	
227	Open wounds and injuries to blood vessels		5
	(S01,S11,S15,S21,S25,S31,S35,S41,S45, S51,		
	\$55,\$61,\$65,\$71,\$75,\$81,\$85,\$91,\$95,T01,T06.3,T09.1,T11.1,T11.4,T13.1,		
	T13.4, T14.1, T14.5)	3,014	
150	Asthma (J45-J46)	2,738	6
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	2,711	7
196	Other complications of pregnancy and delivery (020-029,060-063,067-		8
	071,073-075,081-084)	2,528	

156	Gastritis and duodenitis (K29)	2,388	9
125	Essential hypertension (I10)	1,702	10
143	Other acute upper respiratory infections (J00,J02,J04-J06)	1,668	11
230	Other injuries of specified, unspecified and multiple body regions		12
	(\$09,\$16,\$19,\$29,\$39,\$46,\$49,\$56,\$59,\$66,\$69,\$76,\$79,		
	86,S89,S96,S99,T06.0,T06.1,T06.4-T06.8, T07,T09.3-		
	TO9.5,T09.8,T09.9,T11.5, T11.8,T11.9,T13.5,T13.8,T13.9,		
	T14.6,T14.8,T14.9)	1,596	
229	Bitten or struck by dog (W54)	1,589	13
213	Fever of unknown origin (R50)	1,401	14
180	Other diseases of the urinary system (N13-N15, N25-N28,N30-		15
	N39,N99.0,N99.1,N99.4,N99.5)	1,207	

Development Projects-2007

15. World Bank-Kandy District

(I) Constructions

- Completion of the Construction of Kumbukkandura clinic building Kundasale MOH area.
- Extension of Conference hall and MCH clinic at MOH office Madadumbara.
- Construction of MCH clinic at RH Pattiyagama Pallegama.
- Construction of the upstairs of MOH office building at Wattegama.
- Construction of a retaining wall at pangollamada Health centre at MOH Akurana area.
- Construction of retaining wall at Retiyagama Health centre at Medamahanuwara MOH area.
- Construction of a retaining wall at RH Thalathuoya.
- Construction of a retaining wall at MOIC s quarters ar PU Pamunuwa.
- Construction of a retaining wall at PU Marassana
- Construction of a new wall and fixing a door and windows for temporary clinic at Thalatuoya.

Construction of a toilet at Koshinna health centre.

(II) Repairs

- Repair of building at Udurawana Health centre MOH wattegama.
- Repair of building at Gallella Health centre at Poojapitiya MOH area.
- Repair of building at Weligalla Health centre at Poojapitiya MOH area.
- Repair of roof and floor at MOH quarters at Werellagama.
- Roof repair, tiling and other essential repairs of dental clinic at DH Ankumbura
- Repair of Drugs stores at DH Dolosbage
- Repair of Ward No 1 & 2, sewerage system and Construction of a fence at RH Kolongoda.
- Repair of Dark room at DGH Nawalapitiya
- Repair of Kitchen ,roofs, Water system and electrical system at RH Mampitiva
- Repair roof & windows at Aluthgama health centre.
- Repair of senior medical officer on call rooms complex DGH Nawalapitiya

(III) Provision of Surgical & Other Equipments

- Ten electric dental units for school dental therapist at Sylvester college, Kingswood college, Mahamaya college, Walala central, Daskara central, Galagedara Primary, Nugawela central, Thalatuoya central, Akurana MOH office and Ampitiya central.
- Dental chairs for school dental therapists.

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Development Projects-2007

- Electric Dental chairs and Units for DC, five air motor set at Dharmaraja Collage, Udunuwara CDC, Digana PU, Thalatuoya PU, Bogambara Prison
- Equipments to DGH Nawalapitiya and other Health institutions.(Rotating chairs, file cabinet, Almirah, cushion chairs)
- Surgical equipments to DGH Nawalapitiya
- Equipments to chest clinic at Kandy
- Equipments to district hospitals (ECG machines-5,Nebulizers-9, Oxygen regulators-10)
- Accessories for Biomedical instruments at DGH Nawalapitiya and Other health institutions.
- Purchasing of five computers and printers to MOH offices at Udunuwara,
 SMO office ,RMO office ,DRMO and Account branch at DPDHS office kandy.
- Procurement of a Multimedia projector for the health education unit kandy.

(IV)Provision of vehicles

- Five three wheelers to MOH areas with more than 80000 population kundasale, Harispattuwa, Udunuwara, Yatinuwara and Wattegama MOH areas.
- Procurement of a vehicle to the district Planning unit -kandy

(V) Training programmes

- Training programmes on counseling skills among public health staff.
- Training programmes on health promoting schools to MOOH, PHNS , PHII teachers
- Training programmes on lactation management to field health staff.
- Training programmes on EPI activities to hospital staff.
- Training programmes for dental therapist Dental surgeons, etc
- Awareness programmes on food handing for owners and workers of food handing establishments

- Awareness programmes on drug regulations for the owners of pharmacies
- Screening for NCD among Government / Private office staff and general public
- TOT programme on Healthy life style and NCD preventive for health and education personal training programme
- Training programmes for teachers , pre schools and students on mental health .
- Training programmes for religious leaders on mental health.
- Training programmes for police officers on mental illnesses.
- Training programmes for heads of the departments of governments institutions on mental illness
- Conducting special programmes on special days (World Tobacco day, World AIDS day etc.)
- Conducting awareness programmes on HIV/AIDS for school children (perfects, leaders of students societies.
- Conducting awareness programmes on occupational hazards among owners and workers of factories and workshops.
- orientation programme for hospitals staff on health promotive hospitals
 (with special focus improvement of productivity and quality of health care
- Training programme for health managers and office staff, on hospitals and administration financial regulations, stores management etc
- Three days trining work shop on BCC (Behavioral Change communication) for health staff
- overseas training for the district health managers on management monitoring and evolution reproductive, health nutrition etc

(VI)Other Projects

- Depot provera injections to female dogs as a dog population control method.
- Dog sterilization program pilot project
- Procurement of loud speaker sets for rabies vehicles
- Printing posters containing health messages

16. World Bank-Matale District

(I) Constructions

- Construction of mortuary at DGH Matale
- Construction of a parapet wall to intern quarters at DGH Matale
- Construction of a well, toilets at CD Wewalawawa
- Construction of a well at CD Aluthwewa
- Construction of the second stage of the ambulance garage at DBH Dambulla
- Continuation work of MO Quarters at DH Galewela

(II) Repairs

- Repairs to Store complex ,Quarters , Wards, drainage system and toilets at DGH Matale
- Repairs to wards , drainage system , OPD building and Kitchen at DBH Dambulla
- Repairs to drainage system and toilets at DH Galewela
- Repairs to Ambulance garage ,dental unit and toilets at PU Nalanda
- Repairs to Quarters, wards and toilets at RH Hattota amuna
- Repairs and refurbishment of office, drivers rest room and vehicle park.

(III) Provision of Surgical & Other Equipments

- Provision of BP Apparatuses to Ante natal clinics of selected institutions.
- Equipments for Mobile dental services.
- Provision of dental chair at DGH Matale
- Provision of Equipments to ENT unit at DGH Matale
- Provision of Equipments to regional dental services
- Provision of ECG Machine to selected institutions
- Provision of tablet counting machine at DGH Matale
- Provision of tablet counting machine at DBH Dambulla
- Provision of Glucometers to Antenatal clinics of selected institutions.
- Provision of Depoprovera and equipment for rabies control unit

(IV)Training Programmes

- DPDHS Staff training (2)
- Hospital staff training (10)
- District Management revies meeting (4)
- Head of the institution meeting(4)
- Progress review meeting (4)
- Monitoring and evaluation of the programme

Development Projects-2007

17 World Bank-Nuwara Eliya District

(I) Constructions

- Construction of a new OPD building at CD kalaganwatta
- Construction of incinerators at selected hospitals (DH Rikillagaskada, DH Dikoya, DH Bagawantalawa, DH Maskeliya, DH Lidula)
- Construction MO on call room DBH Dikoya and DBH Rikillagaskada
- Construction of quarter's complex for RE, MOP, PPO, RS. PHNO,

(II) Repairs

- Repair of ceiling at DH Walapane
- Repair of roof at DH Laxapane
- Repair of building at CD Katabula

(III) Provision of Surgical and other Equipments

- Provision of necessary diagnostic equipments for the required institutions.
- Provision of 10 ECG Machines
- Provision of 10 Diagnosis sets
- Provision of 30 BP Apparatuses
- Provision of laryngoscopes
- Provision of 20 Ambu bags
- Provision of 05 Mobile 05 Dental chairs for Scholl dental clinic

(IV)Training Programmes

- Training programme for relevant curative and preventive health staff on preparedness for bird flu pandemic, identifling diseased birds etc.
- Knowledge updating programmes for the and DDHS,MOHs,DMO/MOO
 PHIs on communicable disease surveillance systems etc.
- Training programme for health workers on vaccine management, cold chain etc.
- Awareness programmes for estate workers on substance abuse and its prevention(35 Programmes)
- Capacity building of PHO staff and estate hospital staff on halth communication material, participation, testing and use (2 days)

- Capacity building of PHC staff and estate hospital staff on, participation & community participation on health promotion (3 days)
- Training on behavior change and communication for PHO staff and estate staff
- Awareness on health promotion and life style for out of school youths.
- Rabies control programmes.

Development Projects-2007

18. Health Sector Development Project -PSDG-Kandy District

(I) Constructions

- Construction of Ward Complex. to Digana Rehabilitation Hospital
- Construction of OPD building to DGH Nawalapitiya (Stage IV)
- Construction of OPD building to DH Kotaligoda (Stage I)
- Construction of Pediatric Ward to DH Kolongoda (Stage I)

(II) Repairs

• Repairs of Main building at DH Ududumbara

19.PSDG-N' Eliya District

(I) Constructions

• Construction of Maternity Ward (Stage II) to BH Rikillagaskada.

20. Health Sector Development Project –PSDG-Matale

(I) Constructions & Repairs

- Construction of Theater Complex (Stage I,II) to DGH Matale.
- Construction of OPD building (Stage I) to DGH Matale.
- Construction of PBU to DGH Matale.
- Construction of Sewerage System to DBH Dambulla.
- Construction of Theater Complex to DBH Dambulla.
- Construction of Doctor's Quarters to DBH Dambulla.
- Repairs of Doctor's Quarters, Water System, Dental Clinic & OPD building at DH Hettipola.

21. CBG-2007

Repairs, Construction, &. Provision - CBG

- Repair of Kadugannawa Training Center
- Repair of fence at Bio Medical Engineering Unit –Watapuluwa
- Repair of Clinic Centers at Moragolla, Gabadagama, Ihala Yatawara
- Repair of Divisional Hospital Kotaligoda
- Repair of nurses Quarters at Delthota Sisila Rehabilitation Center
- Repair of Divisional Hospital-Mampitiya Rehabilitation Center

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- Repair of Mortuary at Divisional Hospital Wilgamuwa
- Repair of Clinic Centers at Matale District Sonuththa, Naula,
 Pangolla, Mahawela, Dam bulla, Pallepola, Sirangahawatte,
 Ukuwela, Nugawela, Bogahawawa,
- Repair of toilets at Divisional Hospital Handungamuwa
- Repair of MO Quarters & Kitchen at Divisional Hospital Ilukkumbura
- Construction of toilets at Gampola MOH areas.
- Provision of Surgical Equipments for Physiotherapy Unit at Digana Hospital
- Provision of Surgical Equipments for hospital in central province
- Provision of Equipments for Divisional hospital –Kotaligoda
- Provision of CDMA telephone at DGH Matale
- Construction of waiting room at Chest Clinic in NuwaraEliya District
- Repair of water supply at Walapane MOH Office,
- Repair of water supply, toilet and intercom system in Dikoya Base Hospital.

22. Children Action Plan – 2007

Construction, Repairs, Provision & Training Matale District.

- MOH Matale-Construction of a Health Centre in Kandegedara
- MOH Rattota- Construction of a Health Centre in Weragama
- MOH Laggala Pallegama- Construction of a Health Centre in Wallewala
- Construction of Inclinator at DGH Matale
- Construction of Placenta pit at DGH Matale
- MOH Pallepola- Repairs to Niandoruwa Health Centre
- MOH Galewela- Repairs to Walaswawa Health Centre
- MOH Naula- Repairs to Mailpitiya Health Centre

- MOH Rattota- Repairs to Welangahawatta Health Centre
- RDHS Office Matale- Repairs of Thiposha Stores
- Provision of CTG Papers to All Hospitals in Matale District
- Provision Uristrips for HB measurements
- Provision Lancets for HB measurements
- Provision of Computer
- Behavioral change communication Training Programme (10)

Development Projects-2007

23. Children Action Plan – 2007 Kandy District. Construction, Repairs

Construction of a new MCH Clinic Center With a PHM Quarters at Pupuressa MOH Doluwa

Construction of a retaining wall at Madolkale Clinic Centre at MOH area Panvila.

Construction of the room for antenatal mothers at MOH Udunuwara.

Repairs of the roof, Walls, floor & Colour Washing at Ambale, Dunuwila, Galabodawatta, Poddalgoda, Godahena health Centers at Madadumbara MOH area.

Repair of toilet & floor of family Planning clinic at Madadumbara MOH area

Fixing of grill for windows at thelambugawatta Health Centre at MOH area Akurana

Repair building of Megodagama Health Center at MOH area Wattegama

Repair floor and roof at Kalugala Health Centre at MOH area Udadumbara

Extention of MCH clinic Space at RH Kahawatta.

Extention of MCH clinic building at Kundasale MOH office & retaining wall

.31. Health Sector Development Project -UNICEF— 2007 Nuwara Eliya District.

- Construction of 1302 toilets in Walapane ,, Maskeliya Thalawakale ,
 Kothmale,Rikillagaskada Ambagamuwa ,and NuwaraEliya , MOH areas
- Water Project in Ambagamuwa ,and Walapane MOH areas
- Volunteer training Programmes in Thalawakale, Maskeliya, and NuwaraEliya MOH areas,
- Training programme of life skills for health staff in NuwaraEliya,
 Rikillagaskada, and Maskeliya MOH Areas
- Training Programme of ECCD for health staff in NuwaraEliya , Maskeliya , MOH areas .

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Abbreviations

ABBREVIATIONS

1.	ANC	Ante Natal Clinic.
2.	AMC	Anti Malaria Campaign.
3.	BCG	Bacillus Calmate and Guanine Vaccine
4.	ВН	Base Hospital.
5.	CBR	Crude Birth Rate.
6.	CDR	Crude Death Rate.
7.	СР	Central Province.
8.	CD&MH	Central Dispensary & Maternity Home.
9.	PMCU	Primary Medical Care Unit.
10.	DPDHS	Deputy Provincial Director of Health Services.
11.	DDHS/MOI	Divisional Director of Health Services / Medical Officer of Health.
12.	DBH	District Base Hospital
13.	DGH	District General Hospital
14.	DMO	District Medical Officer
15.	DH	Divisional Hospital.
16.	DF	Dengue Fever.
17.	DHF	Dengue Hemorrhagic Fever.
18.	DPT	Diphtheria Polio Tetanus Vaccine.
19.	DT	Diphtheria, Tetanus Vaccine.
20.	ECG	Electro Cardio Gram.
21.	ENT	Ear Nose Throat.
22.	FHB	Family Health Bureau.
23.	FDI	Food & Drug Inspector
24.	HIV	Human Immune Deficiency Virus.
25.	HEO	Health Education Officer
26.	HP	Health Promotion

27.	IUCD	Intra Uterine Contraceptive Device.
28.	IMR	Infant Mortality Rate
29.	JE	Japanese Encephalitis.
30.	MMR	Maternity Mortality Rate.
31.	MC	Municipal Council
32.	MR	Measles Rubella Vaccine.
33.	MB	Multi Bacillus
34.	MC	Medical Clinic
35.	МОН	Medical Officer of Health
36.	MOIC	Medical Officer Incharge
37.	MCH	Maternal & Child Health
38.	MA	Management Assistant
39.	NGO	Non Government Organization
40.	NCD	Non Communicable Disease
41.	NSACP	National STD/AIDS Control Programme
42.	OPD	Out Patient Department
43.	OPV	Oral Polio Vaccine
44.	PB	Pausy Bacillus.
45.	PDHS	Provincial Director of Health Services.
46.	PPO	Planning & Programming Officer
47.	PHM	Public Health Midwife.
48.	PHI	Public Health Inspector.
49.	PHNS	Public Health Nursing Sister.
50.	RMOIC	Registered Medical officer Incharge
51.	RSPHNO	Regional Supervising Public Health Nursing Officer
52.	RH	Rural Hospital.
53.	SC	Surgical Clinic.
54.	SPHM	Supervising Public Health Midwife.
55.	SPHI	Supervising Public Health Inspector
56.	SPHI/D	Supervising Public Health Inspector/Divisional
57.	STD/AIDS	Sexually Transmitted Disease /Acquired Immune Deficiency Syndrome.
58.	SDT	School Dental Therapist
59.	SSDT	Supervising School Dental Therapist
60.	SSO	Statistical Survey Officer
61.	SO	Statistical Officer
62.	TH	Teaching Hospital.
63.	TT	Tetanus Toxoide Vaccine.
64.	ТВ	Tuberculosis