1. GENERAL INFORMATION

1.1 Basic facts

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 Thotupala 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 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	14,013	256	38,259	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

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 the Country 2008 was 21,128,772 The annual growth rate for 2008 was 0.94 %.

Table 1.2 – Total population and population density

	Sri Lanka	Kandy	Matale	Nuwaraeliya	Central province
Total population (census 2001)	18,797,300	1,272,500	442,000	703,610	2,418,110
Estimated population 2008	21,128,772	1,360,238	476,154	736,758	2,573,150
Population density (persons per square Kilometer)	300	663	226	412	433

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.

1.3.2 Age composition

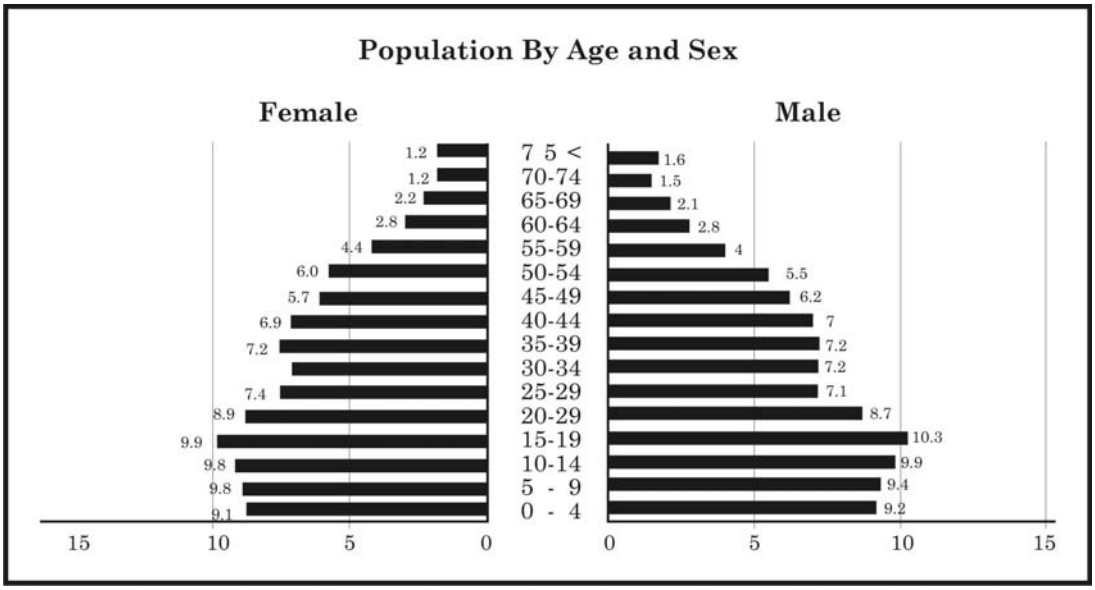
The age distribution is given in fig.1.1.The visible feature of the age distribution is the increase of the proportion of the older age groups. A detailed age breakdown is given in table 1.3.

Table 1.3. Distribution of population of Central Province by Age & Sex .

Year	Kandy		Matale		N'Eliya		Central Province		
	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



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 Distribution of population by Ethnicity

	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 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 Province	64.5	22.3	9.7	3.5	0.06

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.

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 as38.2 per 100,000 LB. The MMR for the Central Province through MMR active surveillance system is reported as 45.8 per 100,000 LB For 2008.

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

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) by District

	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

Computer literacy rate

According to the computer literacy survey done by Dept of Census and Statistics, computer awareness among 5-69 yrs in Central province was 31.0% and computer literacy among the same age group was 14.8% for years 2006/7. The national values for the above were 37.1% and 16.1% respectively

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 Nuwaraeliya, 46.5% of females have not been to school or not completed primary education.

Table-: 1.7 Distribution of population (5 years and over) by educational attainment and sex by District

		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 grade 1-5	All	22.3	21.6	25.3	29.8
	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 GCE(O/L)/NCGE/SSC	All	18.8	19.4	16.5	12.1
	Male	18.4	19.1	15.7	12.4
	Female	19.2	19.7	17.2	11.7
Passed GCE(A/L)/HNCE/HSC	All	9.4	10.6	7.5	4.6
	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 by District

	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.

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 81.9% and in Nuwara Eliya it is about 72.4 percent.

Table.1.9 Availability of safe drinking water by District

	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 tap/ Tap outside dwelling	32.9	51.7	22.4	10.0
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 – Availability of sanitation facilities by District

	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.

1.5.8 Source of cooking fuel

Table.1.11 - Main source of cooking fuel by District

	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 Households using Mosquito nets and coils by District

	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 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

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

	Per capita expenditure on Housing		Per capita expenditure on Health		Per capita expenditure on Education		Per capita expenditure on Transport	
	Poor	Non poor	Poor	Non poor	Poor	Non poor	Poor	Non poor
	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(Rs)	(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 by districts

	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

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 district45.2% 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: Sterilization	560513	17.0	46403	19.9	14243	21.1	43305	38.2
Modern temporary methods:	268266	8.1	21789	9.3	5451	8.1	6243	5.5
PIlls	212491	6.4	14850	6.4	6715	10.0	**	**
IUCD	491713	14.9	34541	14.8	11139	16.5	13533	12.0
Injection	185887	5.6	15288	6.6	**	**	**	**
Condoms	**	**						
Norplant	**	**						
Any traditional method:	524671	16.0	27851	11.9	6790	10.1	7073	6.3
Safe period	332968	10.1	16928	7.3	**	**	**	**
Withdrawal	190014	5.8	10653	4.6	**	**	**	**
Other	**	**	**	**				

Source – DHS 2006/07 *including pregnant women
** Reliable estimates cannot be provided due to small cell size.

1.7 Child Education, Health and Nutrition

- 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 Nuwaraeliya is severly undernourished (height for age) compared to other 2 districts and also with the national value.

Table 1.16 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 District

	Height-for-age		Weight-for-height		Weight-for-age	
	% below 3 SD	% below 2 SD	% below 3 SD	% below 2 SD	% below 3 SD	% below 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 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.

Chapter Two

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.
- To create a community which is committed to the prevention of diseases.
- To create a healthy and satisfied community through providing qualitative and proportionately adequate curative care services.
- Upliftment of areas which require special attention in the health sector such as Estate Health Sector, Rehabilitation of physically and mentally disadvantaged patients, Healthy and safe work place
- To develop the quality of the service through a systematically planned human resource development.
- To instill the concept of " customer friendly " health services through the development of the attitudes among all health staff.

2.3 Provincial Health Administration

Previously, the entire health system of Sri Lanka functioned under a Cabinet minister of the Central Government. However, with 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 guidelines 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.

a) Primary Care Institutions

- ★ District Hospitals
- ★ Peripheral Hospitals

} Categorized as Divisional Hospitals (DH) in the current Classification.

- ★ Rural Hospitals
- ★ Central Dispensaries – 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)

figure 2.1

figure 2.2

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 1.

Table 2.1 Summary of health care institutions and field areas by District

	MOH areas	PHI areas	PHM areas	TH	DGH and DBH	DH	PMCU	Specialized units
Kandy	23	69	427	03	02	47	28	12
Matale	12	26	138	-	02	18	15	04
Nuwaraeliya	13	33	234	-	03	22	22	03
Central province	48	128	799	03	07	87	65	19

- 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 Availability of wards and bed strength in institutions under Central Provincial Health Department

		No. of institutions		No of wards		No of beds	
		2007	2008	2007	2008	2007	2008
Secondary care institutions	Kandy	01	01	18	18	468	442
	Matale	02	02	30	30	897	881
	Nuwaraeliya	02	02	12	12	194	206
Primary care institutions	Kandy	75	75	181	181	2097	2008
	Matale	33	33	57	57	622	603
	Nuwaraeliya	44	44	94	94	1203	1124
Central province		157	157	392	392	5481	5264

Table 2.3 Total number of beds and beds per 1000 population in all government health institutions (including line ministry institutions) by District

	No of beds	No. of beds per 1000 population
Kandy	6,055	4.8
Matale	1,484	3.4
Nuwaraeliya	1,704	2.4
Central province	9,243	3.8
Sri Lanka	67,024	3.4

Central Province has bed strength of 3.8 (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 by District

	No. of hospitals	No. of beds
Kandy	11	301
Matale	3	17
Nuwaraeliya	3	15
Central Province	17	333

Considering the private sector, Kandy district plays a major role in provision of health care through 11 private hospitals whereas Matale and Nuwaraeliya districts have 3 private hospitals each.

2.5 Health Manpower

Table 2.5 The numbers of all Staff categories of health staff in Central provincial health department in 2007 and 2008 (as at 31st December)

No.	Designation	No. of staff 2007	No. of staff 2008
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	3	3
5	Medical officers	492	524
6	Medical specialists - Consultants	37	40
7	Dental specialists - Consultants	1	1
8	Dental surgeons	73	65
9	Regional Dental Surgeon	3	3
10	Divisional Registered Medical Officer	3	3
11	Registered/Assistant Medical Officers	223	224
12	Deputy Director (Finance)	4	4
13	Statistical officer	40	39
14	Nursing Officer- special grade	03	10
15	Hospital Sisters	36	32
16	Nursing officer	908	966
17	Supervising Public Health Midwife	41	37
18	Public Health Midwife	1064	1057
19	Divisional Public Health Inspector	4	4
20	Supervising Public Health Inspector	7	8
21	Public Health Inspector	146	140
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	31	29
27	Pharmacist	37	37
28	Medical Laboratory Technologist	31	34
29	Microscopist (PHLT)	22	22
30	Radiographer	8	9
31	E.C.G. Recordist	6	7
32	Ophthalmic Technologist	5	5
33	Physiotherapist	9	7
34	Special Grade Dispenser	3	3
35	Dispenser	131	128
36	School Dental Therapist	55	48
37	Food & Drug Inspector	2	4
38	Health Education Officer	7	6
39	Hospital Diet Steward	3	2
40	Cooks	4	4
41	House Warden	2	2
42	Hospital Attendants	597	901
43	Packer	2	2
44	Public Veterinary Dog Vaccinator	9	9
45	Unit Controller Supervisor	3	3
46	Entomological Assistant	7	12
47	Regional Malaria Officer	2	2
48	Public Health Field Officer	46	48
49	Spray Machine Operator	145	143
50	Administrative Officer	5	4
51	Management Assistant	216	224
52	Ward Clerk	6	4
53	Driver	137	218
54	Programming & Planning Officer	57	58
55	Statistical Survey Officer	3	3
56	Medical Record Assistance	52	46
57	Progrmme Assistant	8	7
58	Data Entry Operators	3	3
59	Office Aide /KKS	12	13
60	Hospital Overseer	12	15
61	Watcher	5	8
62	Health Laborers	1427	1423
64	Telephone Operator	3	3
66	Lab Orderly	1	1
67	Circuit Bungalow Keeper	2	1
68	Occupational Therapist	2	2
69	Development Assistant	1	1
70	Planning & Programming Assistants	1	2
71	Bio Medical Engineer	1	0
72	Technical Officer	1	1
73	Medical Record Officer	1	1
74	Translator	0	1
	Grand Total	**6228**	**6683**

There is considerable increase of some staff categories such as medical officers, nursing officers, paramedical staff categories, attendants and drivers during 2008. However, numbers of some other categories such as public health midwives and inspectors, dispensers and laborers have not increased accordingly.
There were 82 doctors and 139 nurses respectively serving for 100000 people in the Province with in the health institutions in Central Province (including line ministry institutions).

Table 2.6 Cadre information of institutions under line ministry

Designation		EXSISTING CADRE			
	TH Kandy	TH Peradeniya	DBH Gampola	DGH NuwaraEliya	SBCH Peradeniya
Medical Specialists (Consultants)	66	06	06	12	09
Medical Officers	628	125	55	56	61
Dental Surgeons	21	43	02	07	02
Nursing Officers	1527	519	138	153	72
Medical Laboratory Technologists	46	13	03	09	07
Pharmacists	38	25	08	11	04
ECG Technicians	14	05	03	04	02
Radiographers	35	12	02	03	04
Physiotherapists	15	03	00	01	01
Occupational Therapists	01	02	00	00	00
Hospital Midwives	47	48	12	07	00
Attendants	312	00	22	24	00
Laborers	453	329	31	227	66

Chapter-3

3. CURATIVE CARE SERVICES

Curative care services are provided to the people in Central Province through a network of institutions. These include 3 tertiary care institutions, 7 secondary care institutions 153 primary care institutions and 17 specialized institutions. Of these, five secondary care institutions, all primary care institutions and all specialized institutions come under Central Provincial Health Department. (Annexure 4)

Being a relatively large province with diverse climatic and geographic variation, its people are subjected to a wide spectrum of ailments requiring dynamism in the provision of health services. High population density in the region has intensified this challenge with overcrowding of health institutes, causing an increased demand for improved infrastructure and efficient planning. Adding to this is the popular patient behavior pattern of bypassing the sequential process in which health care ought to be sought. This has inevitably led to a further congestion of the tertiary and secondary health care units while causing underutilization of resources at primary care level.

In 2008, 2,061,448 and 478,323 people had received treatment as OPD and in-ward patients respectively from secondary and tertiary care hospitals while the corresponding figures were 3,339,604 and 257,052 for the 153 primary care institutes spread out in the province.

Secondary care institutions consist of the four common specialties, Medicine, Surgery, Paediatrics, Obstetrics & Gynaecology 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, haematological, bacterial and histopathological investigations.

A parallel health care is provided by 17 private hospitals based in the urban areas of the province. Additionally there are 4 medical specialists, 47 general practitioners and 4 dental surgeons providing full time care in the private sector with a relatively larger proportion of medical specialists, medical officers and dental surgeons doing the same on a part time basis. Complementing these services are 14 medical centres and 31 private medical laboratories within the province.

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). In Central Province the total number of Primary care institutes stands at 153 as of 2008.

The Divisional hospitals provide both outpatient and inpatient care including the provision of basic health facilities for the treatment of minor ailments, referral to secondary and tertiary care institutions for further treatment, provision of perinatal care and follow up of patients referred from secondary or tertiary care institutions. On the other hand Primary Care Units concentrate on outpatient services.

Although these institutions are also being developed to provide quality health care for the local population, as aforementioned, the general trend is to seek medical care from secondary or tertiary care institutions, driven by the probable misconception

that the bigger the hospital the better the care. Similarly, a large number of pregnant mothers prefer to deliver at bigger medical institutions based on the lack of faith they have of the quality of care at primary level

This has seen to a significant reduction in the bed occupancy rate at primary care institutions as compared to larger hospitals in urban areas of the province, attributing to the hazardously disproportionate utilization of available facilities. It is notable that the bed occupancy rate of primary care hospitals is still below 50% though an encouraging trend from 2007 can be seen in Kandy and Nuwara Eliya Districts. (Fig.3.1)

The ideal scenario would be for only those patients needing specialized management being referred to a higher level health care institution by a primary care establishment, with the latter taking over the total management of minor health issues while ensuring a satisfied patient outcome

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. Already, nearly all of these institutes are equipped with a minilab to pave way for enhanced supportive services.

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

Table 3.1 Basic information and services delivered in primary care institutions by District

	Kandy	Matale	Nuwara Eliya	Total
No. of Institutions	77	33	44	154
No.of beds	2,008	603	1,124	3,735
No.of wards	224	56	94	374
Bed occupancy rate (%)	45.0	40.0	42.7	43.5
No.of Admissions	144,530	42,259	70,263	257,052
OPD Attendance	2,034,108	600,200	705,296	3,339,604
Total inpatient days per year	329,514	87,780	175,150	592,444
No.of clinics held	10,637	3,514	7,773	21,924
Clinics Attendance	551,762	136,694	162,170	850,626
Total No. of Deaths	373	121	216	710
Total No. of DeathsWithin 48 hours	198	48	91	337
No.of Deliveries	2,704	798	3,679	7,181
No.of patients transferred out	19,942	4,289	11,847	36,078
No. of Emergency Treatment Units (ETU)	15	01	01	17
No. of patients treated in the ETU	4,613	841	352	5,806

figure 3.1
figure 3.2
figure 3.3

Table 3.2 – Services provided by primary care institutions in Central Province in 2007 & 2008

		OPD attendance	Indoor admissions	Clinic attendance	Deliveries
Kandy	2007	2,330,812	134,575	504,035	2,446
	2008	2,034,108	144,530	551,762	2,704
	% change	-12.7	7.4	9.5	10.6
Matale	2007	751,997	37,060	137,048	714
	2008	600,200	42,259	136,694	798
	% Change	-20.2	14.0	-0.3	11.8
Nuwaraeliya	2007	821,859	65,758	152,490	3,971
	2008	705,296	70,263	162,170	3,629
	% change	-14.2	6.9	6.4	-8.6
Total	2007	3,904,668	237,393	793,573	7,131
	2008	3,339,604	257,052	850,626	7,131
	% change	-14.8	8.3	7.2	0.0

An encouraging increase in indoor admissions and clinic attendance to primary care institutes is evident in the year 2008. Except in Nuwaraeliya District, there has been an approximate 10% increase in the number of deliveries handled in these institutes. The decline of the same by a similar percentage in Nuwaraeliya District can be attributed to the bulk of deliveries being handled by Rikillagaskada and Dickoya Hospitals which were converted to secondary care hospitals in 2007. Total number of deliveries in these two hospitals amount to 1560 in 2008 as opposed to 1346 in 2007 which equates to a 16% increase.

However, a disappointing dip is evident in OPD attendance in all three districts.

Patients receiving treatment in the OPD of a Divisional Hospital

3.2 Secondary Care Services

Seven secondary care institutions provide specialized services to the people in the Province. Of these, two hospitals (DGH Nuwaraeliya and DBH Gampola) are managed by line ministry while the rest come under the administration of the Central Provincial Health Department. Those are DGH Matale, DGH Nawalapitiya, DBH Dambulla. DBH Dickoya, and DBH Rikillagaskada. The latter two were upgraded to secondary care units in 2007 and will be discussed separately.

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.

Table 3.3 Basic information and services provided by secondary care institutions (including line ministry institutions)

	DGH Matale	DGH Nawalapitiya	DBH Dambulla	DGH Nuwaraeliya	DBH Gampola
No. of wards	19	14	09	12	08
No. of beds	683	442	198	374	311
OPD attendance	302,834	247,922	160,061	163,723	212,700
Admissions	59,743	45,182	38,758	36,415	37,203
Bed occupancy rate (%)	74.9	68.1	106.3	86.3	88.9
Total No.of Inpatient Days	186,799	109,626	76,810	117,773	121,389
Total No.of Deaths	427	415	361	480	423
Total No.of Deliveries	5,826	3,951	3,783	5,137	3,627
Total No of Live Births	5,839	3,893	3,779	4,823	3,595
Total No of Maternal Deaths	00	04	00	06	00
Total No of Still Births	42	74	31	75	32
Patients Transferred out	937	2,498	1,864	1,545	1,715
Minor operations	7,406	5,929	2,876	5,136	3,421
Major operations	5,397	3,456	2,112	2,472	2,129
Clinics Held	2,796	1,556	860	2,220	1,146
Clinics Attendance	175,711	133,220	71,510	98,560	103,521
Patients treated in the ETU	3,172	2,142	1,408	5,758	324

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

Fig. 3.4 Patient load handled by secondary care institutions

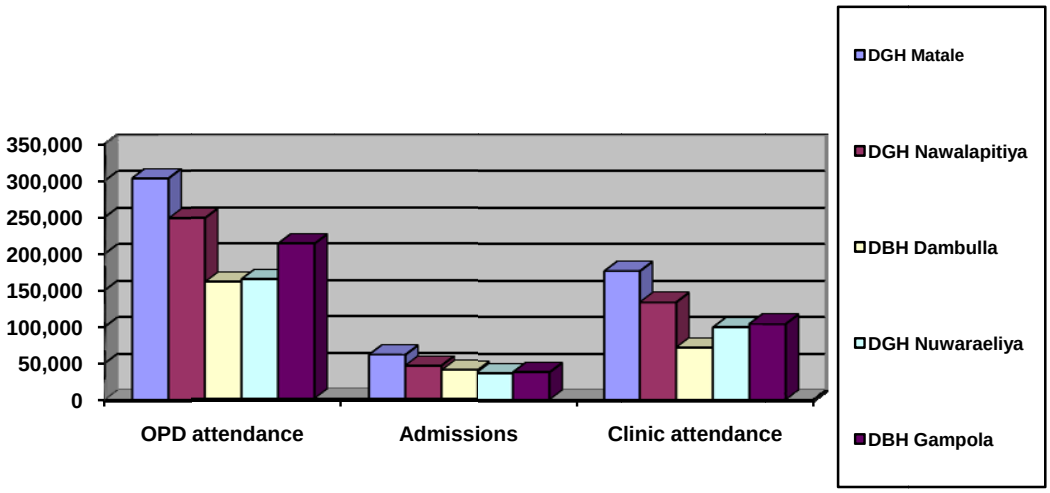


Fig. 3.5 Services provided by the secondary care hospitals

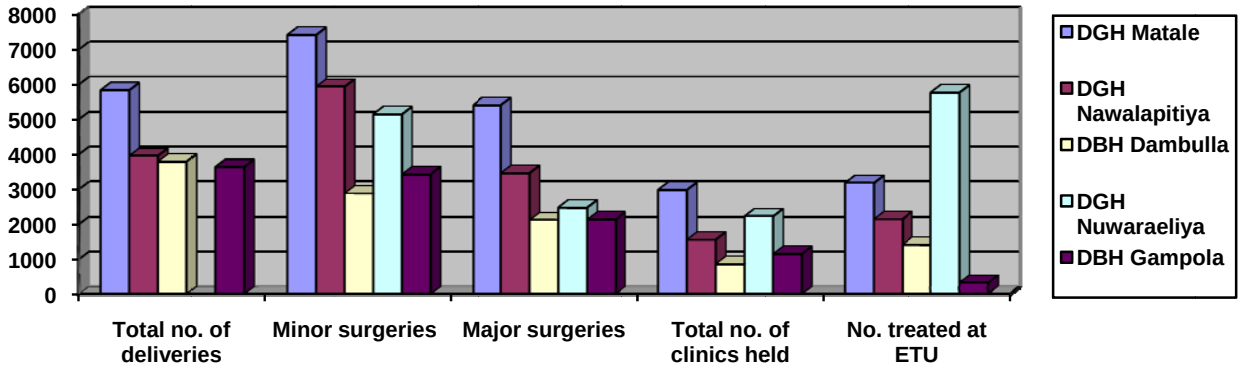


Table 3.4 Trends of the services provided in secondary care institutions under Central Provincial Health Department.

		DGH Matale	DGH Nawalapitiya	DBH Dambulla
No. of wards	2007	21	18	09
	2008	21	18	09
	% change	0.0%	0.0%	0.0%
No. of beds	2007	683	468	214
	2008	683	442	198
	% change	0.0%	-5.5%	-7.4%
OPD attendance	2007	295,303	209,992	132,998
	2008	302,834	247,922	160,061
	% change	2.5%	18.1%	20.4%
Admissions	2007	55,083	41,724	33,419
	2008	59,743	45,182	38,758
	% change	8.5%	8.3%	15.9%
Bed occupancy rate	2007	73.4	70.9	90.0
	2008	74.9	68.11	106.3
	% change	2.0%	-3.9%	18.1%
Clinic attendance	2007	158,598	131,857	65,143
	2008	175,711	133,220	71,510
	% change	10.8%	1.0%	9.8%
Deliveries	2007	5,633	4,141	3,355
	2008	5,826	3,951	3,783
	% change	3.4%	-4.6%	12.8%
Major surgeries	2007	3,560	3,051	1,995
	2008	5,397	3,456	2,112
	% change	51.6%	13.3%	5.9%
No.of Deaths	2007	386	364	166
	2008	427	415	361
	% change	10.6%	14.0%	117.0%
No.of patients transferred out	2007	1,157	2,006	1,551
	2008	937	2,498	1,864
	% change	-19.0%	24.5%	20.2%

In year 2008 there is an apparent increase in the OPD attendance, hospital admissions and clinic attendance from the previous year with a static number of wards being maintained in all three hospitals. In DBH Dambulla the bed occupancy rate has risen by 18% while the actual number of beds had dropped by 8%. Major surgeries handled by these hospitals have increased with DGH Matale showing a 34% rise. The number of deliveries handled in Nawalapitiya seems to have declined. This maybe due to the redistribution of care of uncomplicated pregnancies to the peripheries of the region. The demand for supplementary services such

as radiological investigation facilities and blood bank services show a rising trend. There has been a marked rise in the number of deaths in DBH Dambulla 117% Improved infrastructure and facilities may have enabled DGH Matale to reduce the number of patient transferred out by 20% in 2008.

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 in maternal morbidity, mortality and perinatal deaths in the province.

Table 3.5 Maternal and new born Care Statistics of secondary care institutions under Central Provincial Health Department.

Type of Indicator	DGH Nawalapitiya	DGH Matale	DBH Dambulla
No.of admissions to Obstetric unit	5,916	7,790	5,462
Daily average of maternal admissions	16.2	21.0	15.0
Total no.of deliveries	3,951	5,826	3,783
Single delivery	3,908	5,771	3,758
Twin delivery	42	54	24
Triplet delivery	01	01	01
Mode of delivery			
Spontaneous delivery	2,816	3,598	2,812
Forcep delivery	09	90	03
Breech delivery	07	06	-
Vacuum extractions	145	44	71
LSCS	974	2,088	897
Caesarean section rate	*24.7%*	*35.8%*	*23.7%*
Total no.of live births	3,893	5,839	3,779
Total no.of still births	74	42	31
Still birth rate (per 1000 live births)	*19.0*	*7.2*	*8.2*
Total live Births by birth weight			
>2500g	2,962	4,654	3,095
<2500g	931	1,185	684
Percentage of low birth weight babies	*23.9%*	*20.3%*	*18.0%*
Early neonatal deaths*	32	35	15
Early neonatal death rate (per 1000 Live Births)	*8.2*	*6.0*	*2.1*
Perinatal Mortality rate (per 1000 Live births)	*27.2*	*13.2*	*10.3*
Maternal Deaths	04	-	-
Maternal death rate (per 100,000 Live Births)	*102.7*	-	-
Manual removal of placenta	52	59	44
Postpartum haemorrhage	37	17	-

* Also refer table 3.13

In addition to curative care services, secondary healthcare institutes provide special preventive care activities such as Anti-rabies and Ant-tetanus vaccination. Around

17,743 Anti-rabies vaccines and 8,094 Anti-tetanus vaccines have been issued by three provincially managed secondary care hospitals in 2008.

3.2.1 Supportive services for curative care in secondary care institutions:

3.2.1.1 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.

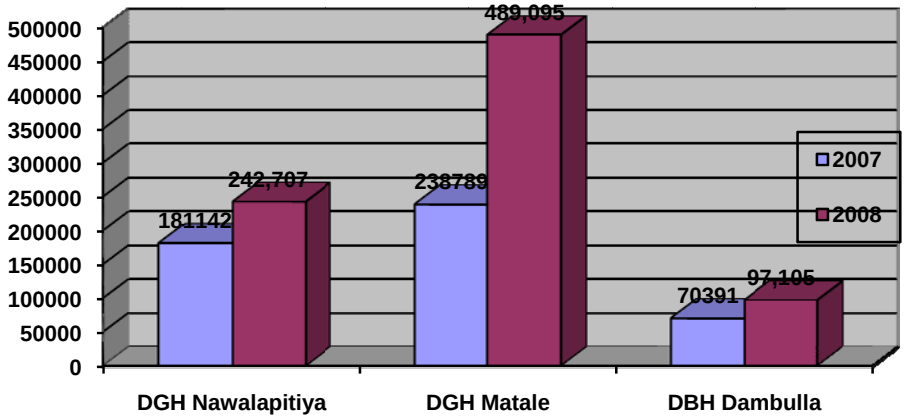
All secondary care institutes have well equipped laboratories with the services of a Consultant Pathologist. Facilities are present to perform investigations in Biochemistry, Hematology, Biotechnology and Histopathology. While most laboratories are equipped with auto analyzers some are yet to receive this facility to replace the manual methods that are in existence. Discussions are under way with a view of improving the quality and overall efficiency in which patient care is given.

In 2008, the provincial secondary hospitals had performed more than 800,000 laboratory tests.

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

Test category	DGH Nawalapitiya	DGH Matale	DBH Dambulla
Biochemistry	84,335	196,033	33,584
Histopathology	1,367	13,683	NR
Bacteriology	10,620	17,334	1,673
Haematology	96,500	213,251	61,848
Other	49,885	48,794	-
Total	242,707	489,095	97,105
Total No of MLTs	08	12	4
No of tests per MLT per year	30,338	40,758	24,276

Fig. 3.6 Investigations handled by the three secondary care hospitals in 2007 & 2008



Discussions are underway to facilitate the laboratory of DBH Dambulla to function in an enhanced capacity by methods of improved infrastructure and an increase of staff.

Laboratory Facilities at Secondary Care Institutes

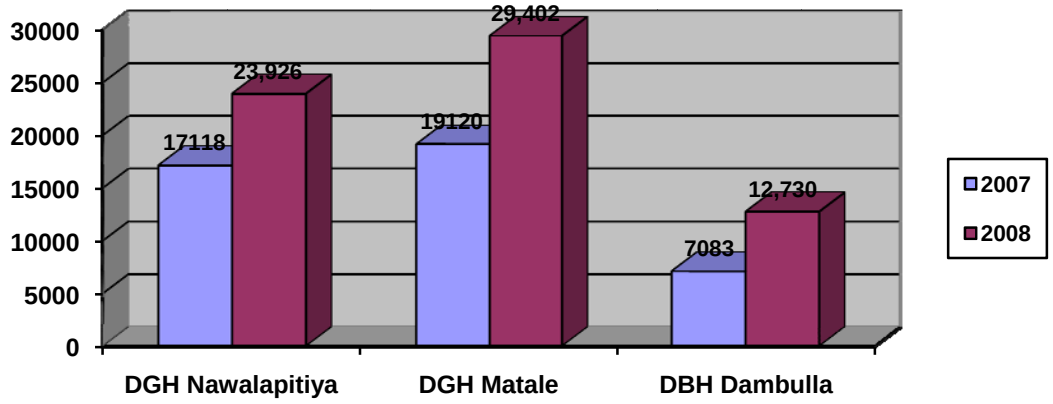
3.2.2.2 Radiology Investigations:

Radiological 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 Cysto-Urethrograms (MCUGs). In addition, these hospitals provide ultrasound scanning facilities. It is planned to improve the existing radiology facilities by way of providing modern equipment (eg. X-ray machines with fluoroscopy facilities and CT scans) in the near future.

Table 3.7 Radiological investigations done in secondary care institutions under Central Provincial Health Department.

	DGH Nawalapitiya	DGH Matale	DBH Dambulla
No of OPD & clinic cases	7,982	6,024	1,182
No of Ward Cases	11,539	-	6,519
No. of other Investigations	4,405	23,378	5,029
Total	**23,926**	**29,402**	**12,730**
No of Radiographers	3	3	1
No. of tests per Radiographer per year	7,975	9,801	12,730

Fig 3.7 Radiological investigations done in secondary care institutions in 2007 & 2008



The high number of tests per radiographer per year in Dambulla may indicate the necessity to expand the cadre of radiographers in this hospital.

Scene from an X-Ray room of a Secondary Care Institute

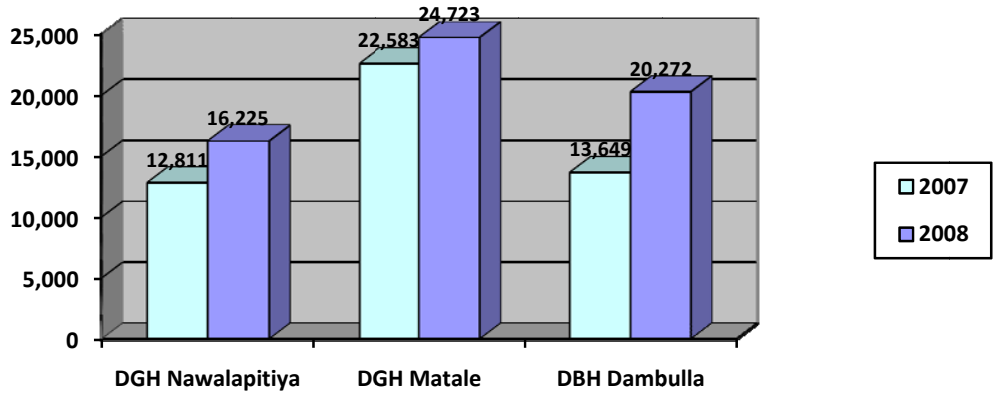
3.2.1.3. Electrocardiography services

Electrocardiography (ECG) being an informative investigation for the management of many life threatening conditions ranging from ischaemic heart disease to certain types of poisoning, the requirement of this facility at secondary care units could not be overemphasized. The need to maintain a fully functional status of this service around the clock has been identified.

Table 3.8 ECG recordings done in secondary care institutions under Central Provincial Health Department.

	DGH Nawalapitiya	DGH Matale	DBH Dambulla
OPD	2,156	1,513	813
Clinics	13,089	1,416	825
Wards	980	21,794	18,634
Total	16,225	24,723	20,272
No. of ECG recordists	2	3	2
No. of ECGs per recordist per year	8,113	8,241	10,136

Fig. 3.8 ECG recordings done in secondary care institutions in 2007 & 2008



ECG Recording on a patient

3.2.14 Blood bank services

In any institution which provides complete maternal services and operative services, a well established blood bank is a mandatory requirement. 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

	DGH Nawalapitiya	DGH Matale	DBH Dambulla
No. of donors	2,106	2,293	1,492
No. of blood pints taken from other Blood banks	521	350	504
No. of blood pints issued	2,303	2,105	1,106
No. of blood pints discarded	236	54	480

3.2.2.5 Physiotherapy Services

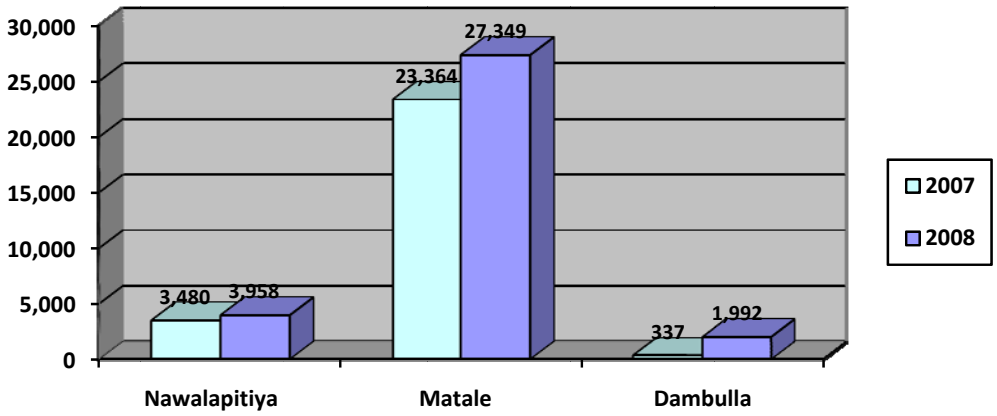
The Physiotherapy units at the DGH Nawalapitiya, DGH Matale and DBH Dambulla provide outpatient as well as inpatient services. These units have well trained physiotherapists supported by other required staff and are equipped to provide the appropriate therapy depending on the needs of the patient.

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

Table 3.10 Physiotherapy services done in secondary care institutions under Central Provincial Health Department.

	DGH Nawalapitiya	DGH Matale	DBH Dambulla
No of new patients treated	726	8,266	457
No of revisited patients treated	3,231	19,081	1,534
No. of Physiotherapists	1	2	1
Total No of patients treated	3,958	27,349	1,992
Patients per Physiotherapist per year	3,958	13,675	1,992

Fig. 3.9 Patients treated in physiotherapy units of secondary care institutions in 2007 & 2008



A Patient Receiving Physiotherapy at a Secondary Care Institute

3.2.16 Special clinics

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

Table 3.11 Specialized clinics conducted in secondary care institutions under Central Provincial Health Department

Specialty	DGH Nawalapitiya	DGH Matale	DBH Dambulla
Medical	41,964	46,242	23,613
Surgical	11,924	14,080	4,522
Gynecology and Family Planning	3,612	5,156	2,624
E.N.T	4,019	4,195	862
Eye	12,538	10,914	7,052
Paediatric	11,231	16,272	5,561
Psychiatric	8,263	13,204	3,631
Dental and Maxillofacial (OMF)	10,586	23,449	14,204

3.2.1.7 Surgeries

All three hospitals perform major and minor surgeries under guidance of surgeons specialized on different entities. Surgeries done during 2008 relating to the respective specialties are given below.

Table 3.12 Surgeries done in secondary care institutions under Central Provincial Health Department.

Specialty	DGH Nawalapitiya			DGH Matale			DBH Dambulla		
	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total
General Surgery	1,260	4,607	5,867	600	5,046	5,646	402	1,733	2,135
Obstetrics	1,963	532	2,495	1,021	-	1,021	910	-	910
Gynecology	488	1,649	2,137	427	669	1,096	647	796	1,443
EYE	945	134	1,079	1,408	214	1,622	412	963	1,375
Dental and Maxillofacial	43	521	564	--	-	-	-	-	-
E.N.T.	166	495	661	-	-	-	-	-	-
Total	4,865	7,938	12,803	3,456	5,929	9,385	2,371	3,492	5,863

Fig. 3.10 Major surgeries performed in secondary care institutions from 2006-2008

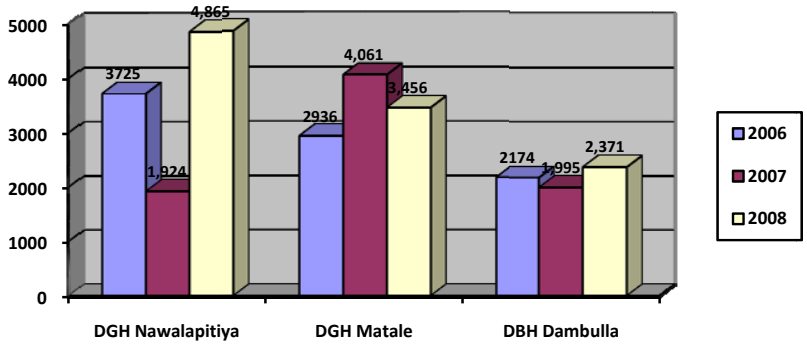
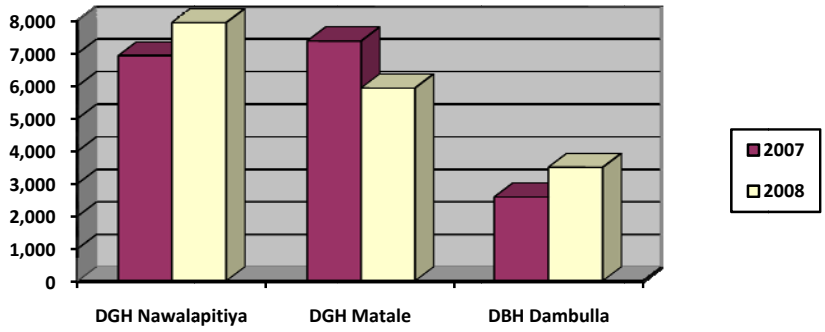


Fig 3.11 Minor surgeries performed in secondary care institutions from 2006-2008



A Scene from an Operating Theatre at a Secondary Care Institute

3.2.1.8 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 and are equipped with ventilators, incubators and other necessities.

Table 3.13 - Premature Baby Care in secondary care institutions under Central Provincial Health Department.

		DGH Nawalapitiya	DGH Matale	DBH Dambulla
1	Admissions	662	951	488
2	Maturity			
	< 28 weeks	13	14	468
	28-36 weeks	175	226	05
	> 36 weeks	474	560	15
3	Weight			
	< 1000g	21	18	02
	1000 – 1490g	44	101	20
	1500 – 2490g	304	380	79
	>2500g	293	448	387
4	Reason for admission			
	Birth Asphyxia	20	58	19
	Meconium Aspiration	16	20	05
	Preterm	117	236	01
	IUGR	39	87	08
	Grunting	56	-	-
	Poor Sucking/lethargy	34	82	01
	Gestational DM	5	35	08
	Congenital anomalies	38	57	03
	Other	337	496	443
5	Total Number of NND*	34	35	28
6	Number of early NND*(Deaths within the first 7 days of life)	32	35	15
7	Cause of Death			
	Prematurity	19	13	14
	Birth Asphyxia +Septicaemia	04	7	6
	Congenital anomalies	2	15	8
	Other		-	-
8	Number Discharged	572	131	292
9	Number Transferred out	55	35	25

*** Includes Deaths of Transferred Out babies**

NND-Neonatal Death

Scene from a Premature Baby Unit (PBU)

3.2.1.9 Intensive Care Unit

Out of the 3 secondary care institutions belonging to the Provincial Health Department, DGH Matale and DGH Nawalapitiya had Intensive Care facilities in 2008. A new ICU is being established for DBH Dambulla and will start functioning in the near future.

Table 3.14 ICU statistics in secondary care institutions under Central Provincial Health Department.

	DGH Matale	DGH Nawalapitiya
No. of ICU beds	4	6
ICU admissions	273	371
ICU deaths	98	67
ICU death rate	35.9%	18.1%

Fig 3.12 Total ICU admissions in 2007, 2008

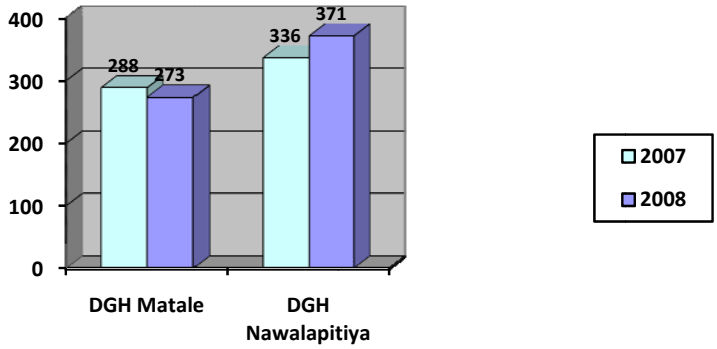
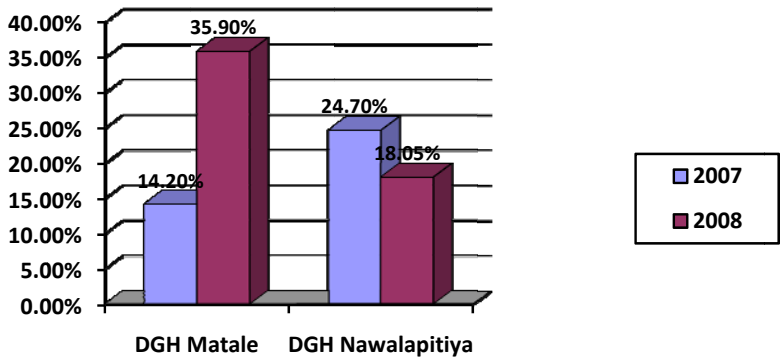


Fig 3.13 ICU death rates in 2007, 2008



Scene from an Intensive Care Unit

3.2.1.10. Hospital deaths

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

Table 3.15 Hospital deaths which occurred in secondary care institutions under Central Provincial Health Department.

	DGH Nawalapitiya	DGH Matale	DBH Dambulla
Inpatients deaths	415	427	361
No of Deaths on admission (OPD Deaths)	76	111	67
Deaths within 48 hours of admission	267	248	148
Still births	74	42	31
Infant deaths	40	35	16
Maternal deaths	04	00	00

It is clearly evident that approximately 50% of the hospital deaths in these institutions occurred within 48 hours of admission which emphasizes the importance of improving emergency care in these hospitals as well as in other primary care hospitals from where they get transferred.

3.3 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. .

3.3.1 DBH Rikillagaskada:

DBH Rikillagaskada was started as a rural hospital with a staff of 05 on 28th of August 1951. It was built on a stretch of land called 'waljambugahamulahena' that extended over 1acre, 2 roods and 893 perches. The land was donated by 3 estate companies and the first building 'Milton Vivian Senanayake memorial building' is named after one of the benefactors.

At the inception, the single building housed the Out Patient Department, the male and female wards and the maternity ward. A paediatric ward was added to the hospital in 1969 by Hon.Dudley Senanayake, the prime minister of the time. The building that was completed and handed over to the hospital by honourable Prime Minister Mrs.Sirimawo Bandaranayake in April 1975 is currently being used as the female ward (ward number 05) The medical wards were built in 1992 and were handed over to the hospital by Hon. Minister of Health and Women's affairs, Renuka Herath in 2003, the new three story building complex housing the OPD was built replacing several old buildings.

DBH Rikillagaskada, which belongs to Nuwara Eliya district, caters to a population of 170,000 and the nearest hospital to which a patient can be transferred for further management is the Kandy General Hospital which is 40 km away. Therefore the need for a secondary healthcare institute in this area was acknowledged.

After the decision to upgrade Rikillagaskada hospital to this status, a new maternal ward complex including a labour room, obstetric theatre and a paediatric ward was built in 2005 and was opened to the general public on 16th July 2007.

The initial staff in 1951 comprised of an Assistant Medical Officer (AMO), two midwives and three attendants. By 1990, it had expanded to include two medical officers, three AMOs and a dental surgeon. Currently the staff comprises of 146 members which include a District Medical Officer, 10 Medical Officers, 1 dental surgeon and 3 registered medical officers.

During 2008 a medical laboratory technician and a pharmacist were appointed to strengthen the services provided at DBH Rikillagaskada. Initial assessment has been completed to provide blood bank services. The upgrading of facilities to provide radiological services, laborartory services and storage of drugs and surgical items has not been completed.

Following is a summary of the developments that have taken place in the hospital during 2008:

- ◊ Acquisition of surgical equipment to initiate provision of surgical facilities in the hospital.
- ◊ The introduction of a special grade nursing officer, a pharmacist and a medical laboratory technician to the staff with a total number of staff members being increased by 22 members.
- ◊ Commencement of a chest clinic on 17th of February 2008 to provide specialist respiratory care for the people of the region.
- ◊ Completion of a complex of on-call rooms with facilities to accommodate 5 doctors at a time.
- ◊ The establishment of an Emergency Treatment Unit
- ◊ Development of the health education unit to conduct timely programmes pertaining to the prevention of the spread of epidemics and the management of noncommunicable diseases.

In recognition of the progress shown in in 2008, DBH Rikillagaskada won a certificate of merit in the competition organized by the National Productivity Secratariat.

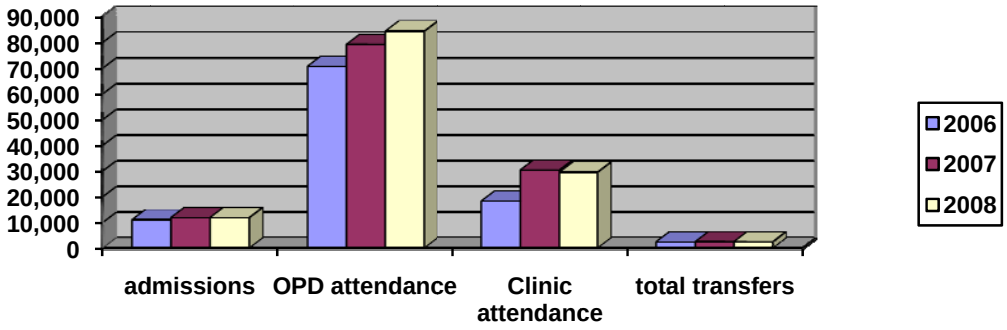
One major drawback that DBH Rikillagaskada is currently facing is the inability to provide continued specialist care despite having adequate support staff for several specialities. However Out-reach Obstetric service have been planned at the hospital with the assistance of Dr. S. Hemapriya (Consultant Obstetrician and Gyanaecologist, Teaching Hospital, Kandy) while Dr. A. Senanayake (Consultant Community Paediatrician) respectively.

Table 3.16 Basic data of DBH Rikillagaskada 2006-2008.

	2006	2007	2008
No of Beds	116	106	118
No of Wards	05	05	05
Bed Occupancy Rate (%)	77.9%	57.9%	52.5%
Admissions	10,949	11,825	11,803
OPD Attendance	70,639	79,141	84,248
Total Inpatient days per year	32,988	22,412	22,596
No of clinic held	202	196	706
Clinic Attendance	18,197	30,305	29,434
Total no of deaths	41	22	62
Total no of deliveries	414	398	446
Total no of Patient Transferred from the institution	2,391	2,432	2,413
No. of patients treated in the ETU			3184

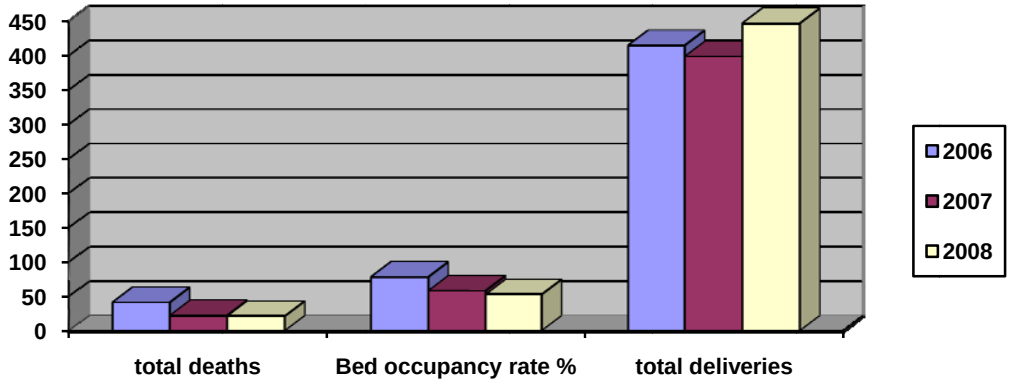
With the starting of specialist paediatric clinics, chest clinics, increased number of medical clinics, the total number of clinic sessions held in the hospital has had a significant increase over 2008.

Fig 3.14 Indoor admissions, OPD attendance, Clinic attendance and total transfers in DBH Rikilgaskada



The OPD attendance is on the increase while the number of indoor admissions and total transfers remains static.

Fig 3.15 Total deliveries, total deaths within 48 hours from hospital admission and bed occupancy rate in DBH Rikilgaskada.



Although there is a decline in bed occupancy rate, the number of admissions has not reduced. The reduction in the total inpatient days can be due to the shorter hospital stay of patients. The latter in turn is attributable to the improvements made in human resources and other services leading to efficient, quality care and an early discharge.

District Base Hospital Rikillagaskada

3.3.2 DBH Dickoya

DBH Dickoya belongs to the Nuwara Eliya District and caters to a population of- 207,500- inclusive of the estate population. The nearest secondary care hospital is DBH Nawalapitiya situated 40 km away.

Having started during the British reign, it operated as a divisional hospital which housed 6 wards, an Out Patient Department, a dispensary and a surgical theatre with facilities for major surgeries even in the bygone era.

By year 2004 the importance of upgrading this hospital to a secondary care inistitution had been identified. A major milestone was the signing of the memorandum of understanding between the Government of Sri Lanka and the Government of India to construct a 150 bed hospital in 2004. Furthermore, in 2007 the renovation of the theatre commenced to develop surgical facilities and an improved patient care was enabled for Obstetric & Gynaecological and Paediatric patients through the provision of pertinent equipment. Both above ventures were possible due to the continued generosity shown by the Government of India.

Further renovation to the theatre was done with the funding provided by the Government of Austria. As a result, by 2008 surgeries such as Caesarean Sections, LRT and ERPC were taking place in the institute.

During 2008, with the vision of further expanding the hospital, the MOH building was taken over by the hospital administration, a laboratory was established and the number of staff was increased from 30 to 70. A Physician, an Obstetrician and a Paediatrician were appointed to the hospital in 2007/2008 for the provision of continuous specialist care to the people of the region.

Through the funds provided by the Government of Belgium, the year 2008 saw to the construction of a blood bank, a water purification system, solar power enabled hot water system (to two wards) and proper toilets in the institution.

Moreover, an intercom system was established to expedite the communication within the premises in 2008.

Table 3.17 Basic data on DBH Dickoya

	2006	2007	2008
No of Beds	73	88	88
No of Wards	07	07	10
Bed Occupancy Rate (%)	54.8	86.7%	73.2%
Admissions	4,866	7,200	10,029
OPD Attendance	27,008	39,887	49,850
Total Inpatient days per year	14,598	27,858	23,522
No of clinics held	211	240	247
Clinic Attendance	11,694	18,173	16,867
Total no of deaths	48	36	48
Total no of deliveries	699	948	1,114
Total no of Patient Transferred from the institution	645	547	813

Fig. 3.16 Indoor admissions, OPD attendance & clinic attendance at DBH Dickoya 2006-2008.

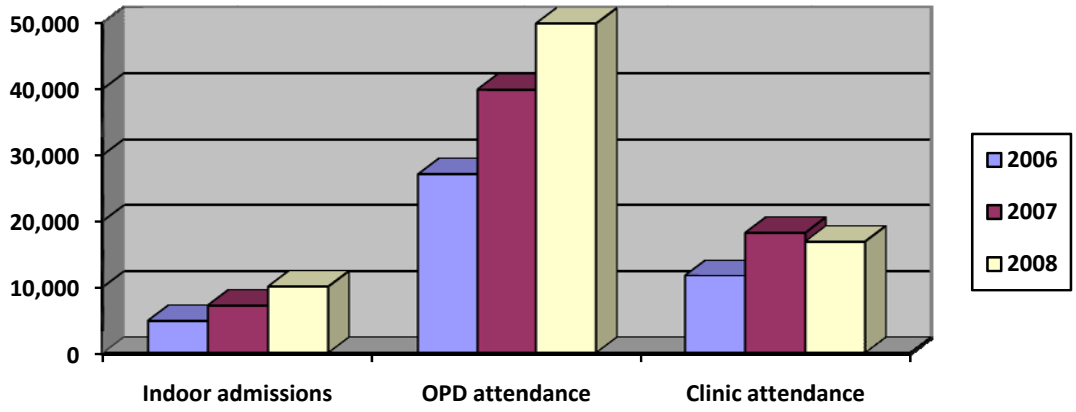


Fig. 3.17 Total deliveries & total transfers at DBH Dickoya 2006-2008

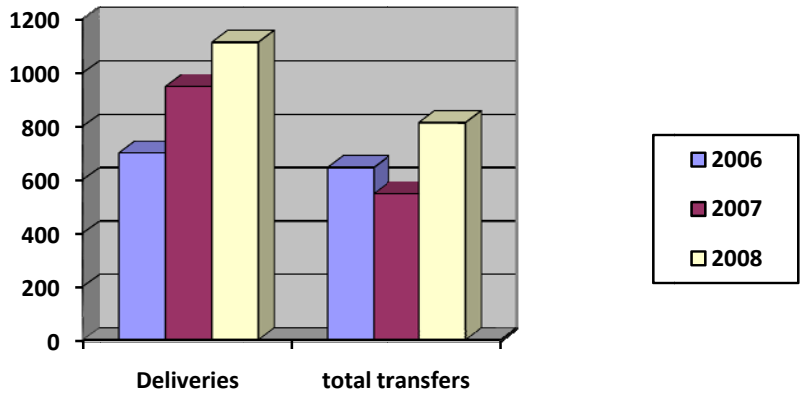
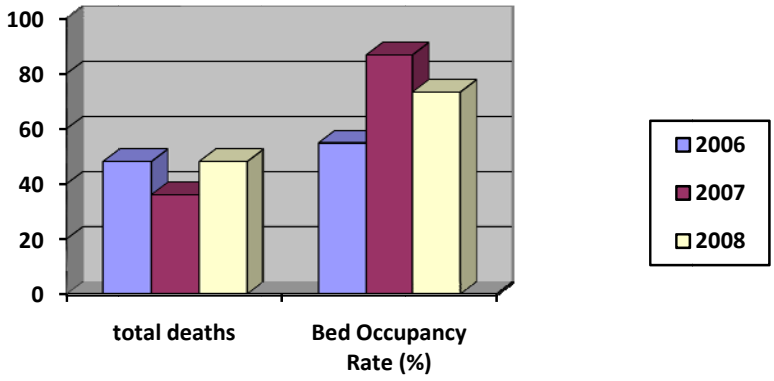


Fig. 3.18 Total deaths & bed occupancy rate at DBH Dickoya 2006-2008



Over the past three years, DBH Dickoya has been handling an increasing number of admissions, OPD attendees and hospital deliveries.
The number of wards was increased from 7 to 10 in 2008. However the bed occupancy rate had dropped by 13.5% over the year with a concomitant decline in the

total inpatient days per year. Though there is an increase in the number of clinics held, the clinic attendance has declined by 7%. The 39% increase in admissions and the 24% increase in OPD attendance may be accountable for the 48.6% rise in the number of patients transferred from the institute.

District Base Hospital Dickoya

3.4 Tertiary care services

There are three institutions (TH Kandy and TH Peradeniya & Children's Hospital, Peradeniya) providing specialized tertiary care services to the people in the Central Province. All three are managed by the line ministry. The bed strength and the services provided by these institutions during 2008 are given in table 3.18.

Table 3.18. The bed strength and the services provided by tertiary care institutions in Central Province during 2008

	TH Kandy	TH Peradeniya	SBCH Peradeniya
No. of wards	78	21	03
No. of beds	2,258	880	112
OPD attendance	383,659	349,449	107,002
Admissions	172,765	59,668	6,757
Bed occupancy rate	85.0%	74.0%	58.6%
Total No.of Inpatient	703,134	239,229	23,957
Total No.of Deaths	2,864	865	43
Total No of patient Transferred out	3,653	1,654	133
Total No of patient Transferred in	30,376	3,700	236
Minor operation done	30,763	7,449	493
Major operation done	24,111	7,677	
Total No of Clinics Held	8,320	6,610	08
Total No of Clinics Attendance	765,179	299,752	19,975

Being the second largest hospital in Sri Lanka, Teaching Hospital Kandy handles the largest number of patients from within the Province.

3.4.1 Maternity Statistics

Type of Indicator	TH Kandy	TH Peradeniya
No.of admissions to Obstetric unit	14,559	8,197
Daily average of maternal admissions	40	22
Total no.of deliveries	11,895	7,096
Single delivery	11,775	6,999
Twin delivery	116	89
Triplet delivery	04	08
Mode of delivery		
Spontaneous delivery	7,979	4,228
Forcep delivery	292	111
Breech delivery	168	0
Vacuum extractions	0	51
LSCS	3,758	2,806
Total no.of live births	11,850	7,115
Total no.of still births	169	86
Still birth rate (per 1000 live births)	*13.8*	*12.0*
Total live Births by birth weight		
>2500g	9,912	5,748
<2500g	2,303	1,399
Percentage of low birth weight babies	*18.9%*	*19.6%*
Early neonatal deaths*	59	53
Early neonatal death rate (per 1000 Live Births)	*4.8*	*7.4*
Maternal Deaths	05	00
Maternal death rate (per 100,000 Live Births)	*40.9*	-
Manual removal of placenta	72	46
Postpartum haemorrhage	51	-

3.4.2 Laboratory Investigations

Test category	TH Kandy	TH Peradeniya	SBCH Peradeniya
Biochemistry	448,140	249,682	DNA
Histopathology	48,882	5,384	DNA
Bacteriology	101,534	18,177	DNA
Hematology	448,624	234,943	DNA
Other	171,120	-	DNA
Total	1,218,300	508,186	33,488
Total No of MLT	46	13	07
No of test per MLT per year	26,485	39,091	4,784

3.4.3 Radiology Investigations

The total number of radiological investigations performed is significantly higher in the tertiary care units compared to the secondary care units.

	TH Kandy	TH Peradeniya	SBCH Peradeniya
No of OPD & clinic cases	32,915	7,200	DNA
No of Ward Cases	29,786	11,405	DNA
No. of other Investigations	30,258	66,281	DNA
Total	92,959	84,886	6,144
No of Radiographers	35	12	04
No. of tests per Radiographer per year	2,656	7,074	1,536

*** Radiology Investigations Includes X-ray, Ultra Sound Scan ,CT Scan & MRI**

3.4.4 E.C.G. services

	TH Kandy	TH Peradeniya
OPD	11,976	4,435
Clinics	2,376	2,128
Wards	7,321	26,499
Total	21,673	33,062
No. of ECG recordists	14	05
No. of ECG per recordist per year	1,548	6,612

*** TH Peradeniya Provides ECG Facilities for SBCH Peradeniya.**

3.4.5 Blood bank services

	TH Kandy	TH Peradeniya
No. of donors donated blood	18,963	4,653
No. of blood pints taken from other Blood banks	-	700
No. of blood pints issued	-	5,376
No. of blood pints discarded	3,187	1,113

*** No blood bank Services available at SBCH Peradeniya.**

3.4.6 Physiotherapy services

	TH Kandy	TH Peradeniya
No of new patients treated	18,678	4,887
No of revisited patients treated	112,892	5,660
No. of Physiotherapists	15	3
Total No of patients treated	131,570	105,47
Patients per Physiotherapist per year	8,771	3,516

*** No Physiotherapy services available at SBCH Peradeniya.**

3.4.7 Special clinics

	TH Kandy	TH Peradeniya	SBCH Peradeniya
Medical	296	572	

Surgical	292	338	2920
Gynecology and Family Planning	393	571	-
E.N.T	289	-	129
Eye	427	-	-
Pediatric	244	471	104,33
Psychiatric	153	359	-
Dental and Maxillofacial (OMF)	639	3,589	-
Neonatal Clinic			1,154
Child Guidance Clinic			979
Orthodontist Clinic			4,360

3.4.8 Surgeries

Specialty	TH Kandy			TH Peradeniya			SBCH Peradeniya		
	Major	Minor	Total	Major	Minor	Total	Major	Minor	Total
General Surgery	4,708	16,641	21,349	2,071	4,628	6,699			
Obstetric	3,786	89	3,875	2,806	-	2,806			
Gynecology	1,151	3,253	4,404	1,290	1,583	2,873			
EYE	7,769	2,006	9,775						
Dental and Maxillofacial	144	1,664	1,808	439	316	755			
E.N.T.	947	2,070	3,017	-	-	-			
Total	18,505	25,723	44,228	6,606	6,527	131,33	49	493	542

3.4.9 Premature Baby Unit (PBU)

	TH Kandy	TH Peradeniya	SBCH Peradeniya

1	Admissions	1364	873	Data not available
2	Maturity < 28 weeks 28-36 weeks > 36 weeks	 131 716 523	 32 390 451	
3	Weight < 1000gr. 1000 - 1490 gr 1500 – 2490 gr. >2500gr.	 32 309 602 377	 56 136 416 265	
4	Reason for admission Birth Asphyxia Meconium Aspiration Pre Term IUGR Grunting Poor Sucking/lethargy Gestational DM Congen. Abnormality Other	 274 146 231 107 198 84 81 24 213	 15 26 288 65 81 45 31 44 278	
5	*Total Number of NND	86	09	
6	*Number of early NND (Deaths within the first 7 days of life)	70	37	
7	Cause of Death Prematurity Birth Asphyxia +Septicemia Congen. Abnormality Other	 42 20 17 07	 27 23 18 06	
8	Number Discharged	1037	595	
9	Number Transferred out	36	162	

Includes Deaths of Transferred Out babies
NND-Neonatal Death

3.4.10 ICU care

	TH Kandy	TH Peradeniya	SBCH Peradeniya

No. of ICU beds	09	10	Data not available
ICU admissions	723	217	
ICU deaths	138	159	
ICU death rate	19%	73%	

3.4.11. Hospital deaths

	TH Kandy	TH Peradeniya	SBCH Peradeniya
Inpatients deaths	2,864	764	48
No of Deaths on admission (OPD Deaths)	258	101	
Deaths within 48 hours of admission	458	441	
Still births	169	86	
Infant deaths	59	53	
Maternal deaths	05	00	

Chapter-4

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. These data are collected by individual hospital and quarterly returns are sent to medical statistical unit, Colombo for further analysis. The timeliness of sending these data and quality of the available data are still not up to the expected standards.

The summary of Provincial and District data on leading causes of hospitalizations and hospital deaths (including line ministry institutions) during year 2007 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 2007 of three Districts of Central Province are given in annexure 9-14. As described earlier these data are analyzed by the Medical statistics unit, Colombo and at the moment these data are available only for the year 2007.

Table 4.1 Leading causes of live discharges (including line ministry institutions) by District - 2007.

Disease code (IMMR code)	Disease and ICD code	Central Province		Kandy		Matale		Nuwaraeliya	
		No.	Rank	No.	Rank	No.	Rank	No.	Rank
243	Persons encountering health services for examination, investigation and for specific procedures of health care (Z00-Z13,Z40-Z54)	32937	1	28367	1	3528	5	-	-
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	32921	2	24568	2	3442	6	4911	4
195	Single spontaneous delivery (O80)	32668	3	18194	3	6199	1	8275	1
245	Undiagnosed / Uncoded	25072	4	14039	5	3698	4	7335	2
150	Asthma (J45-J46)	21429	5	13460	7	4091	3	3878	5

227	Open wounds and injuries to blood vessels (S01,S11,S15,S21,S25, S31,S35,S41,S45, S51, S55,S61,S65,S71,S75	21157	6	11784	8	5780	2	3593	6
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	18600	7	14200	4	2403	13	1997	11
220	Superficial injury (S00,S10,S20,S30,S40, S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0 ,T14.0)	18242	8	9517	10	3405	7	5320	3
217	Other signs and symptoms and abnormal clinical findings (R25-R49,R52,R53,R55,R57-R69)	15867	9	13651	6	-	-	-	-
156	Gastritis and duodenitis (K29)	15068	10	8762	13	3137	9	3169	8
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	14546	11	9031	11	-	-	3306	7
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-TO9.5,T09.8,T09.9,T11 .5, T11.8,T11.9,T13.5,T13 .8,T13.9, T14.6,T14.8,T14.9)	14029	12	10228	9	-	-	1584	13
125	Essential hypertension (I10)	13688	13	8940	12	-	-	2480	9
152	Other diseases of the respiratory system(J22,J60-J98)	11784	14	-	-	-	-	2168	10

Source – Medical statistical unit, Colombo

Table 4.2 Leading causes of hospital deaths (including line ministry institutions) by district - 2007.

Disease code (IMMR code)	Disease and ICD code	Central Province		Kandy		Matale		Nuwaraeliya	
		No.	Rank	No.	Rank	No.	Rank	No.	Rank
245	Undiagnosed / Uncoded	541	1	453	1	-	-	77	2
134	Cerebrovascular disease (I60-I69)	446	2	346	2	61	1	39	4
128	Acute myocardial infarction (I21,I22)	432	3	318	3	37	4	77	1
219	Ill-defined and unknown causes of mortality (R95-R99)	298	4	286	4	12	12	-	-
132	Heart failure (I50)	254	5	180	5	42	2	32	6
129	Other ischaemic heart disease (I20,I23-I25)	233	6	170	6	33	5	30	7
177	Renal failure (N17-N19)	187	7	161	7	11	14	15	12
149	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40-J44)	167	8	148	8			-	-
145	Pneumonia (J12-J18)	166	9	124	9	39	3	-	-
022	Septicaemia (A40,A41)	146	10	-	-	-	-	-	-
199	Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05-P07)	138	11	-	-	11	15	66	3
133	Oter heart diseases (127.0-127.8,128-149,151)	131	12	93	11	13	10	25	8
125	Essential hypertension (I10)	117	13	74	13	22	6	21	9
235	Toxic effects of organophosphate and carbamate insecticides (T60.0)	113	14	-	-	15	7	33	5
201	Intrauterine hypoxia, birth asphyxia and other respiratory disorders originating in the perinatal period (P20-P28)	97	15	82	12	-	-	-	-

Source – Medical statistical unit, Colombo

According to Table 4.1, it is evident that Persons encountering health services for examination, investigation and for specific procedures of health care ranked top in

hospital morbidity (specially in Kandy District). These figures provide clear evidence that a large number of patients are admitted to hospitals only for investigations and procedures. This should be an important factor for policy makers to think of an alternative for these types of patients.

Apart from that, viral fevers also ranked as no 2 in hospital morbidity. Injuries, asthma and other respiratory conditions, gastroenteritis related conditions and hypertension have also ranked the top positions in indoor morbidity of the three districts of the Province. These data also provide some evidence regarding the morbidity pattern of the country and creating the awareness of the policy makers on future planning on inpatient care.

There is also a clear evident that undiagnosed / uncoded live discharges ranked 4th 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. This also need to be analyzed deeper to see whether this is really due to the incapability of the medical officers on proper writing of cause of death or some other factor. If this is a problem of writing the cause of death, proper training on this matter should also be considered.

As also evident in national figures, cardiovascular system related diseases such as acute myocardial infarctions, cerebrovascular diseases, ischemic heart disease, heart failure and hypertension have ranked in the top list of the hospital mortality in this Province. Apart from that renal failures and respiratory system diseases such as Pneumonia, bronchitis, emphysemas have also ranked at the top of the inpatient mortality. Another important cause of mortality to consider is the pesticide poisoning which also take a higher ranking in the list. These factors also need to be considered when planning for future patient care with special emphasis to emergency care.

According to the above data, it is evident that the major contribution for the provincial data comes from Kandy District. There are two main reasons for this contribution. The first one is the contribution made from the two tertiary care institutions (TH Kandy and TH Peradeniya) situated in Kandy District. The other one is the number of divisional hospitals situated in Kandy are more compared to other two Districts in the Province.

Chapter-5

5. PREVENTIVE HEALTH SERVICES

This chapter includes information on Maternal and Child health activities, School Health, Family Planning, Well women services, Epidemiological services, Environment Health, EPI, Health Promotion activities, cosmetic drugs and devices and supportive supervision.

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. (Includes clinics in the field and divisional hospitals)

Table 5.1 The population statistics, number clinics and estimates for 2008

	Kandy	Matale	Nuwara Eliya	Total
Population	1,360,238	476,154	736,758	2,573,150
Estimated eligible families	210,837	7386	114,197	398,838
Estimated number of births	26,525	9285	14,367	50,176
Number Ante natal clinics (single+combined) clinics	21	04	81	106
Number child welfare clinics (single+combined)	17	11	53	81
Number poly clinic	255	147	59	461
Number field weighing posts	2029	823	1008	3860
Number IUCD clinics	92	50	32	174

In 2008 maternal and child health services had been provided through 106 antenatal clinics, 81 child welfare clinics and 461 poly clinics.

Table. 5.2 Ante natal Care Services Provided in the Central Province

Indicator	2007		2008	
	Number	percentage	Number	percentage
Eligible families under care	413,814	101.0	435,007	109.1
Pregnant mothers registered by PHMM	51,788	102.8	51,516	102.7
Pregnant mothers registered at home before 8 weeks POA	28,464	54.9	31,923	62.0
Pregnant mothers registered at home before 12 weeks POA	47,195	91.1	47,427	92.1
Pregnant mothers under care	26,884	103.8	26,630	106.1
Primi registered	18,875	36.4	17,616	34.2
Pregnant mothers tested for VDRL at delivery	40,300	98.0	42,207	99.0
Pregnant mothers blood grouping done at delivery	40,856	99.3	42,477	99.7
Pregnant mothers protected with Rubella	49,528	95.6	49,564	96.2
Teenage pregnancies under care	3267	6.3	3019	5.9
Pregnant mothers with BMI < 18.5 kg/m²	11,225	21.7	10,848	21.1
Pregnant mothers with BMI > 25.0 kg/m²	6230	12.0	5438	10.6

The reported data in 2008 indicate that 100% of the eligible families were under care of the Public Health Midwives. Public health midwives have registered 51,516 pregnant mothers during 2008 which is 102% of the estimated figure. Of the mothers registered 92.1% were registered before 12 weeks of pregnancy, which is higher than the reported figure in 2007.

The registration of pregnant mothers before 8 weeks show that 62.0 % 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 5.9% were teenage mothers while 34.2% were primi gravida. Service indicators such as VDRL coverage, Blood Grouping & Rh, Rubella were reported as 99.0%, 99.7% and 96.2% respectively.
The gradual increase in these service indicators show that the PHC teams are even targeting the hard to reach pregnant mothers. The nutrition status of pregnant

mothers have not shown a remarkable difference from 2007 where 21.1% did not have adequate Body Mass Index (BMI < 18.5 kg/m²). The nutrition status of adolescents and also pre pregnant women should be targeted as a key intervention to improve nutrition of women prior to pregnancy.

Table 5.3. Delivery & Out Come of natal Care Provided in the Central Province.

Indicator	2007		2008	
	Number	percentage	Number	percentage
Deliveries reported by PHM (hospital and field)	41,139	81.7	42,619	84.9
Home deliveries	219	0.5	190	0.4
Home deliveries receiving untrained assistance	116	53.0	132	69.5
Live births reported	41,081	81.6	42,405	84.5
Multiple births	608	1.5	642	1.5
Still Births reported	442	*10.8	501	*11.8
Abortions reported	3065	*74.6	3214	*75.8
Low birth weight	6339	15.7	6988	16.4

*** per 1000 LB**

PHMM reported a total number of 42,619 deliveries during 2008 which is 84.9% of the estimated number 50,176. The numbers of home deliveries have slightly decreased from 219 in 2007 to 190 in 2008. 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 16.4% were low birth weight (LBW, birth weight less than 2500gr). The LBW reported from hospitals in the CP was 22.1 % (2008) 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 necessary guidelines for the improvement of reporting was prepared at the Provincial level and disseminated. It is envisaged that the reporting will improve from 2009. The still birth ratio reported for Central Province was 11.8 per 1000LB. 3214 abortions were reported from the Central Province, which gives an abortion ratio of 75.8 per 1000 LB. The gradual improvement of reporting is seen with the appointment of over 100 new PHMM to the remote and vacant areas in the Nuwara Eliya and Kandy Districts and also closer follow up on the reporting of these vital events at MOH level, District and Provincial level.

Table 5.4 Post partum care provided by the Public health midwives

Indicator	2007		2008	
	Number	percentage	Number	percentage
At least 1 visit during first 10 days (of reported deliveries)	36642	89.1	38768	91.0
At least 1 visit during first 10 days (of estimated deliveries)	36642	72.7	38768	73.0
Post natal care around 42 day	30701	74.6	31782	74.6

In 2008 the number of post partum visits were conducted for 91.0% of the reported deliveries during the first 10 days. The over all post partum coverage is only 73.0% 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 remained static at 74.6%. The reporting of mothers with complications has increased during 2008 as compared to 2007.

Table 5.5 Post partum maternal morbidities reported in the Central Province

Indicator	2007		2008	
	Number	percentage	Number	Percentage
Fever	533	13.3	538	12.7
Offensive discharge	282	7.1	87	2.1
Excessive bleeding	264	6.6	206	4.9
Dysuria	189	4.7	174	4.1
Infected/ Separated Episiotomy	989	24.8	1092	25.8
Foreign material in vagina	68	1.7	100	2.4
Infected caesarian section	392	9.8	485	11.4
Deep vein thrombosis	27	0.7	19	0.4
Post partum psychosis	69	1.7	70	1.7
Engorged Breast	800	20.0	932	22.0
Breast abscess	123	3.1	151	3.6
Cracked nipple	238	6.0	358	8.4
Heart failure	21	0.5	28	0.7
Total	3,995	100.0	4240	100.2

Table 5.6 Infant care provided by Public Health Midwives.

Indicator	2006		2007	
	Number	percentage	Number	Percentage
Infants registered by PHMM	43,606	86.6	45,344	90.4
Infant deaths reported by PHMM	472	*11.5	532	*12.5
Infant deaths investigated by PH staff	450	95.3	493	92.7
Neonatal Deaths reported	376	*9.2	382	*8.9
Post neonatal deaths reported	92	*2.2	149	*3.5
Perinatal deaths reported	727	*17.7	791	*18.7
Child deaths reported	68	**0.39	70	**0.38

*** per 1000 LB** **** per 1000 children 13-60 month.**

In 2008 PHMM have registered 90.4% of the estimated infants for routine care as compared to 86.6% in 2007. Despite the improvement in the reporting of infant deaths only 532 (73.6%) has been reported. Out of the infant deaths reported 92.7% has been investigated which shows a slight decline from 2007. 71.8% of the infant deaths are reported to have occurred during the neonatal period. The Perinatal Mortality Rate reported from the field is 18.7 per 1000LB. This shows that more attention needs to be paid by PHMM for the early neonate in the field.

On average 76.1% infants have been weighed monthly at 542 clinics and 3860 field weighing centers. Out of the infants weighed 10.4% were under weight (<-2Sd) while 1.6% were classified as severe under weight (< - 3Sd). The weighing of infants show a slight improvement in 2008 as compared to 2007.

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

Indicator	2007		2008	
	Number	percentage	Number	percentage
Average number of infants weighed monthly	33,031	75.6	35,053	76.1
Infants weighing below – 2Sd	3507	10.6	3632	10.4
Infants weighed below – 3Sd (severe under weight)	578	1.7	574	1.6
Infants weighed over + 2Sd (over weight)	229	0.7	140	0.4
monthly average children weighed 1-2 yrs	37,159	72.8	36,730	70.2
Number of Children 1-2 yrs weighing below -2Sd (moderate under weight)	9298	25.0	10,118	27.4
Number of Children 1-2 yrs weighing below -3Sd (severe under weight)	2704	7.3	2673	7.3
Number of Children 1-2 yrs weighing over + 2Sd (over weight)	727	1.9	300	1.2
Quarterly average of children 2-5 yrs weighed	183,287	147.6	124,905	93.8
Number of children 2-5 yrs weighing below – 2Sd (under weight)	39,291	21.4	46,947	37.6
Number of children 2-5 yrs who weighed below – 3Sd (severe under weight)	12,462	6.8	12,359	9.9
Number of children 2-5 yrs weighed who were above + 2 Sd (over weight)	1433	0.8	1499	1.2

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. Only 70.2% of the children 1-2 yrs were weighed monthly which needs to be improved if we are to take timely action to prevent growth faltering. Out of the children 1-2 yrs weighed 27.4% were moderately under weight (<-2Sd) while 7.3% were classified as severely under weight (< - 3Sd). This clearly highlights the need to strengthen infant and young child feeding practices in the Central Province.

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 percentage of children 2-5 yrs weighed is 93.8% , which means that most children are weighed regularly. 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 first years nor able to identity the percentage of children who are not weighed regularly. The moderate and severe underweight reported in the Nuwara Eliya District is much higher than the other two Districts, which is in line with all national surveys including the recent DHS 2006. 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 under nutrition is to be addressed.

5.1.2 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.

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.

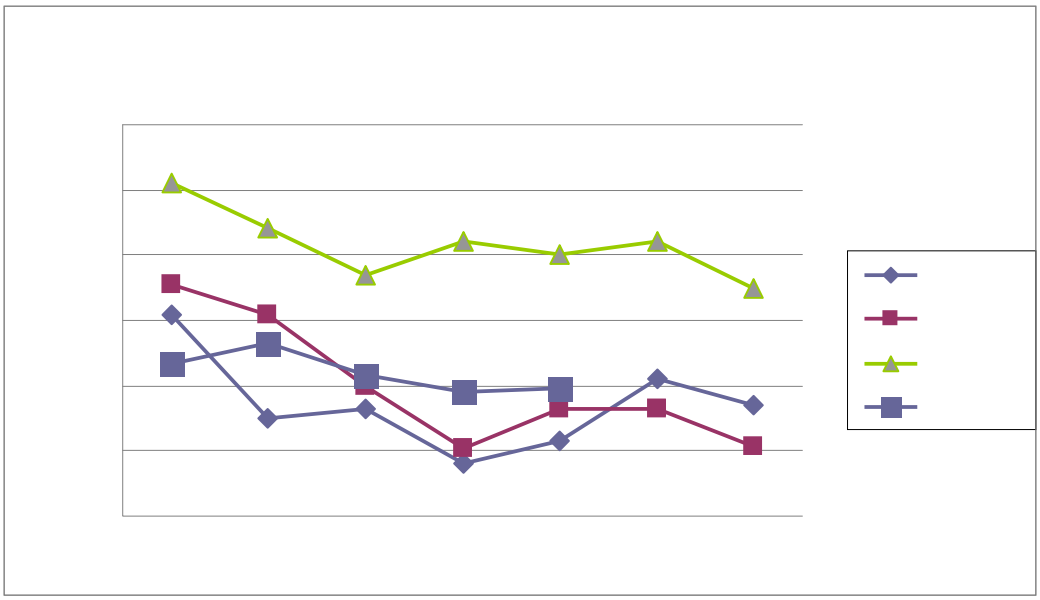
During 2008 the number of maternal related deaths reported from the health staff has declined to 38 from 44 reported in 2007. 23 deaths were confirmed as maternal deaths at the District and National Maternal Mortality Reviews. Based on the national reviews the Provincial MMR of 45.8 per 100,000LB has 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 a higher MMR than the national ratio. The number of Direct maternal deaths have reduced from 17 in 2007 to 12 in 2008. The number of Indirect deaths have increased from 4 in 2007 to 11 in 2008. Post Partum haemorrhage and pregnancy induced hypertension were the leading cause of deaths reported. All efforts should be taken to minimize the preventable deaths further in the Central Province. There were 7 antenatal suicide deaths reported in 2008 similar to the number reported in 2007. These deaths need to be further investigated and early action taken to minimize such deaths.

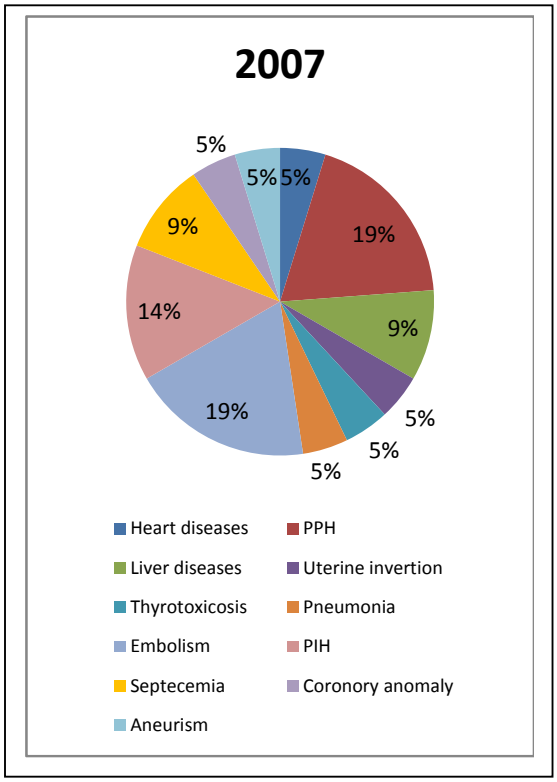
Table 5.8 Maternal Deaths according to classification

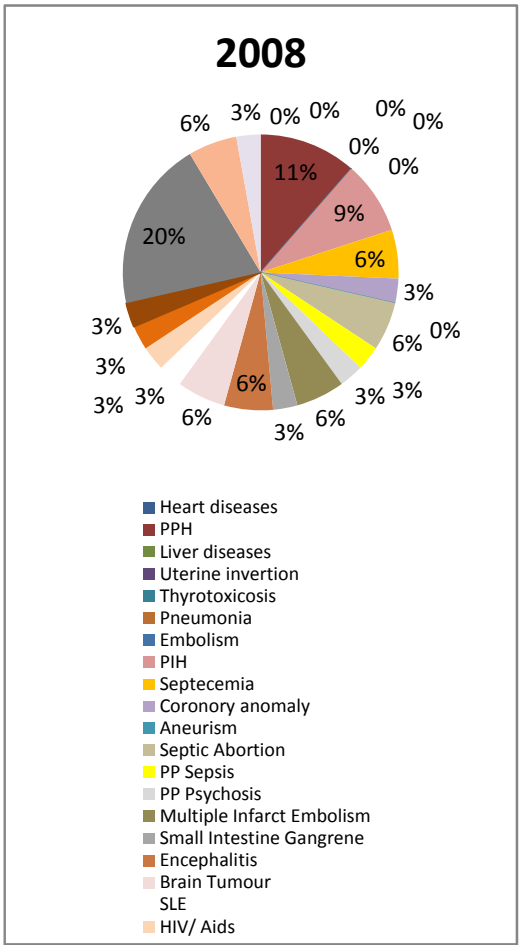
	Kandy	Matale	Nuwara Eliya	Total
Maternal related Deaths notified	18	04	16	38
Direct Maternal Deaths	06	01	05	12
Indirect Maternal Deaths	05	01	05	11
Late maternal deaths	04	Nil	01	05
Incidental	03	02	05	10
Estimated Number Births*	26525	9285	14367	50177
MMR (100,000 LB)	41.5	21.5	69.6	45.8

**** Estimated Births calculated using Provincial CBR 19.5 per 1000LB***

Fig 5.1 Trends of Maternal Mortality Ratio by District of Central Province 2002-2008







5.2 School Health

The concept of "Kandurata Suwa Kekulu" Health promoting school concept 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 2008 a special review meeting chaired by the Chief Minister Central Province was held. The number of schools with school health clubs and the number of schools identified as health promoting has increased in 2008 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. The Provincial Departments of Health and Education was hopeful that the schools would be

classified and had organized an award ceremony during the later part of 2008. This could not be done due to the lethargy and indifference at Divisional level despite several reminders. It is prudent that we use this to felicitate and recognize those schools which have achieved the cut off levels identified.

School Health includes the areas of Healthful 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 2008 sanitation survey has been completed in 1472 (98.2%) schools which is higher than the coverage in 2007. The number of schools where there are adequate water and sanitation facilities were reported as 1255 (83.7%) and 766 (51.1%) respectively. The SMI coverage in the Central Province had a slight decrease from 96.6% in 2007 to 95.8% in 2008. 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 2009. Out of the children examined the commonest health problems identified were dental caries, malocclusion, pallor, skin diseases, visual defects and heart diseases.

Table. 5.9 School Health Activities in the Central Province.

Indicator	2007		2008	
	Number	percentage	Number	percentage
Total Number of schools	1,488		1,499	
Total number of schools sanitation survey completed	1,342	90.2	1,472	98.2
Total number of schools with adequate drinking water facilities	810	60.4	1,255	83.7
Total number of schools with adequate sanitation facilities	747	50.2	766	51.1
Total number of schools SMI completed	1,433	96.6	1,436	95.8
Number of children enrolled in year 1,4,7			245,505	
Number of children examined in year 1,4,7	103,372		163,885	66.8
Stunted	9,176	8.9	9,449	5.8
Wasted	16,983	16.4	25,359	15.5
Over weight	1,052	1.0	1,973	1.2
Total number of defects identified during SMI	67,622		103,936	
No. school health clubs functioning	294	22.6	241	
Number of Health promoting schools	408	28.7	540	

5.3 Well Women Clinic Services

The concept of well women 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. The Family Health Bureau has changed the strategy to target at least the women reaching 35 yrs of age (cohort of 35yrs) during the past few years. In 2008 only 15.6% of the targeted women 35yrs of age have been reached by the WW program. In the Central Province the number of WWCS increased from 68 to 72 by the end of 2008. The performance reported at WWCs during 2008 is given in the table below.

Table. 5.10 Performance in Well Women Clinics in the Central Province.

Indicator	2007		2008	
	Number	Percentage/ incidence*	Number	Percentage/ incidence*
Total clinic sessions held	1184		1214	
First visits to clinic age under 35 yrs	2260	16.4	2318	15.2
First visits to clinic age 35 yrs	2882	21.0	4009	26.3
First visits to clinic age over 35 yrs	8597	62.6	8927	58.5
No. of women subjected to breast examination	14,006	96.0	15,762	100.0
Breast abnormalities detected	345	*2.5	310	*2.0
Number of women subjected to cervical visualization	12,893	88.4	13,699	89.8
Number Pap smear taken	10,899	74.7	12,290	80.6
Number reports received	5997	55.0	5817	47.3
Cervical smears reported as CIN positive	56	*0.5	45	*0.8
Diabetes mellitus detected	248	*1.8	306	*2.0
Hypertension detected	768	*5.5	785	*5.1

- 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 still extremely low. Every effort should be taken in 2009 to make sure that at least the cohort of women aged 35 years are all examined in the WWCs through active out reach services. Pap smear reading in the tertiary care institutions within the Province needs to be advocated and strengthened.

5.4 Family Planning

During 2008 a total of 33,638 new acceptors were recruited which is higher than the new acceptors recorded in 2005, 2006 and 2007.Temporary methods accounted for 93.0% and a three fold increase was seen in the number of permanent methods in 2008 compared to previous years. This was due to the proactive action by the Obstetric departments in the secondary and tertiary care institutes to do sterilizations despite various odds and also the NGOs supporting special FP programmes in the estate sector. This needs to be further strengthened and services made available to all those families requiring permanent methods. The distribution and pattern of new acceptors are given in the table below.

Table. 5.11 Family Planning new acceptors

	New acceptors for IUCD	New acceptors for injectables	New acceptors for oral pills	New acceptors for Tubectomy	New acceptors for Norplant	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
2008	7,322	14,777	6,057	2370	3112	33,638

Of the eligible families under care 257,421 families were reported to be using a modern family planning method thus computing a current user rate of 59.2%. This rate is slightly lower than 59.8% reported in 2007. The percentage of families with unmet need of family planning was reported as 7.5%.

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. 90.4% of the weekly returns were received by the Epidemiology unit in 2008 as compared to 93.5% in 2007. Out of the returns sent 16.3% returns were nil returns as compared to 18.5% nil returns in 2007. 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 2008 for selected notifiable diseases in the CP is given below. Out of the notifications majority of the cases reported were Dengue, Leptosprosis and water borne diseases.

This reflects that a strategic approach is required to control dengue, leptospirosis and water borne diseases in the Central Province, while also strengthening the notification system.

Table 5.12 Selected notifiable diseases reported in the Central Province

	2006		2007		2008	
	Number	Incidence per 100,000 pop	Number	Incidence per 100,000 pop	Number	Incidence per 100,000 pop
Dengue fever/DHF	1906	75.4	577	22.6	612	23.8
Dysentery	1143	45.2	805	31.6	882	34.3
Encephalitis	16	0.6	14	0.5	24	0.9
Enteric Fever	326	12.9	228	8.9	388	15.1
Food Poisoning	75	3.0	398	15.6	287	11.2
Leptospirosis	141	5.6	336	13.2	1468	57.1
Typhus Fever	148	5.9	130	5.1	155	6.0
Viral Hepatitis	446	17.7	2677	104.9	274	10.6

Source: WER

5.5.1 Surveillance of Leptospirosis

The number of leptospirosis cases notified in the Central Province has increased from 336 (13.2 per 100,000 pop)in 2007 to 1468 (57.1 per 100,000 pop) in 2008 , which is more than 400% increase. The total number of leptospirosis cases notified in Sri lanka has also seen an increase during 2008, which was 7421 (36.7/100,000 population), almost 300% increase compared to 2198 cases notified in 2007. 19.8% of the total cases in Sri lanka was reported from the CP. Both Matale and Kandy Districts come within the 8 Districts reporting over 500 cases with the highest incidence (i.e. 177/100,000pop) being reported from Matale for the second consecutive year. 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.

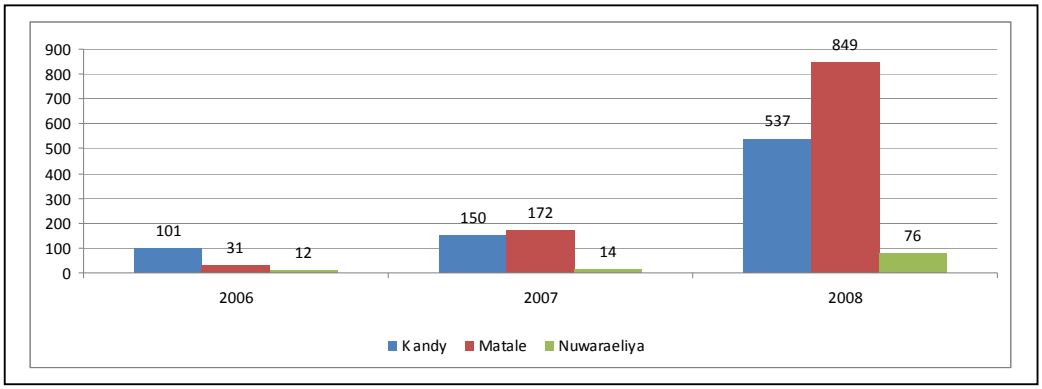
In addition, a large number of patients seek treatment at the private hospitals and these cases are generally not notified. Paddy cultivation takes place in most of the high risk areas and the peak incidence is observed during paddy sowing and harvesting seasons. Increase in the rodent population in 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. There are 7 hospitals out of the 52 sentinel hospitals within the CP.

Out of 207 deaths reported from sentinel sites, the highest number of 39 (18.8%) deaths were from Gampaha while the second highest of 28 (13.5%) deaths were from the Kandy District. Kandy District had the highest Case Fatality Rate of 5.2% among all Districts. Although Matale District reported the highest incidence, the case fatality was extremely low at 0.5%. 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.

Fig. 5.2 No of Cases of Leptospirosis

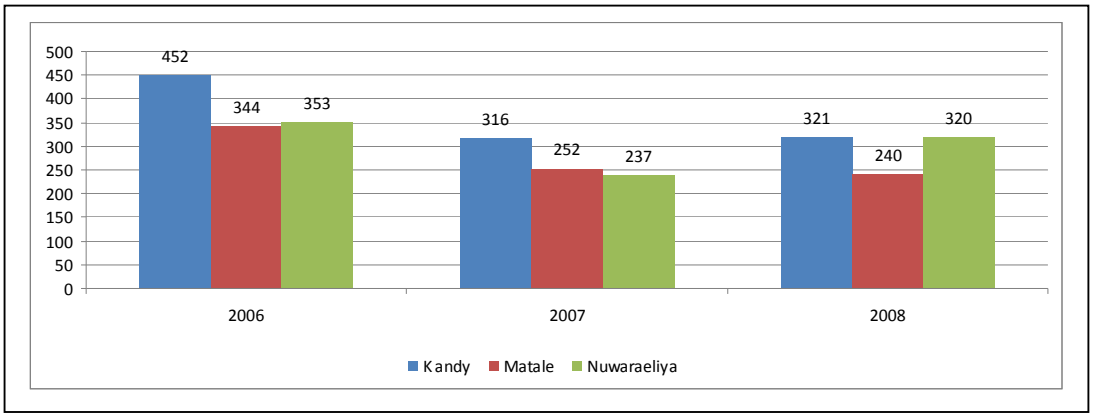


There is no prevention and control programme for leptospirosis and only ad-hoc programmes are being carried out by some interested MOOH at the divisional level. The need to prepare action plans with the support of other relevant sectors focusing more on environmental measures, improved disease surveillance, public awareness, intersectoral coordination, improved clinical management including laboratory surveillance and chemoprophylaxis should be done in all high risk MOH areas to prevent a further increase in 2009.

5.5.2 Surveillance of Dysentry

In the 2008, 882 cases of dysentery were notified in the Central Province at a notification rate of 34.3 notifications per 100,000 population. This is 13.8% of the total notifications of 6379 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 2008 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 is to be reduced.

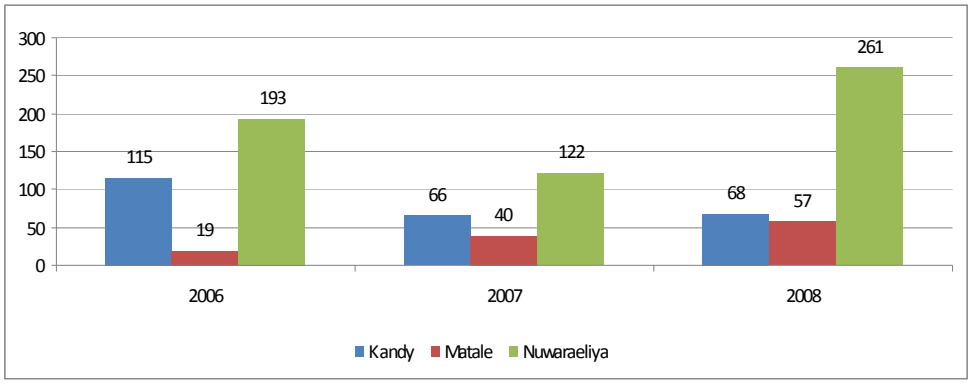
Fig 5.3 No of Cases of Dysentery



5.5.3 Surveillance of Enteric Fever

Total number of 388 cases of Enteric fever was notified in the Central Province during the year at 15.1 notifications per 100,000 population. This is in comparison to 228 cases (notification rate of 8.9 per 100,000 pop) notified in the previous year.
A total of 1933 enteric fever cases were notified in 2008 from the entire country at a notification rate of 9.56 notifications per 100,000 population. Nuwara Eliya District has reported the highest number of cases (notification rate of 35.4 per 100,000 pop) . The out break of enteric fever in the Walapane MOH area in the Nuwara Eliya District was controlled thanks to the dedicated effort of the health staff at Divisional and District level. 550 toilets in the catchment area of the Kurudu Oya was constructed with the support of funds from the Ministry of Healthcare and Nutrition. The subsidy of Rs. 15,000/= per toilet (50% of the total cost and cost estimated for the materials) was provided to the beneficiaries.

Fig. 5.4 No of Cases of Enteric Fever

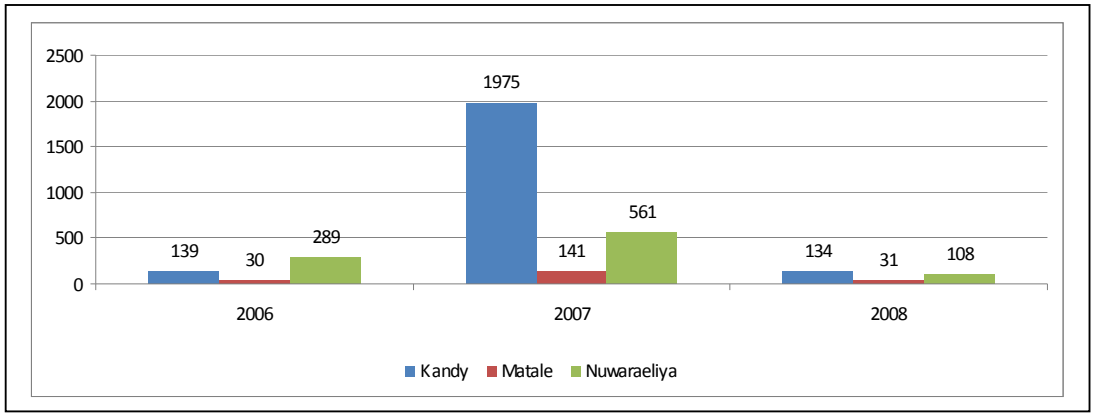


5.5.4 Surveillance of Viral Hepatitis

In the year 2008, 274 cases of viral hepatitis were reported from the Central Province with a notification rate of 10.6 per 100,000 Population, compared to 2677 cases in the year 2007. The out break of Hepatitis in 2007 was controlled with short term measures taken in 2007 hence it is important to focus on longer term sustainable measures to ensure similar epidemic would be prevented in the future. The Provincial Department of Health requested the Ministry of Healthcare and Nutrition to support in strengthening the sanitation in the catchment area. Out of

the total of 1777 toilets required 950 toilets were constructed in 2008 with the support of the Ministry of Healthcare and Nutrition by providing a subsidy of Rs.15,000/= to beneficiaries. The balance toilets need to be constructed in 2009 while also focusing on strengthening the protection of water sources in the respective MOH areas of Udapalatha , Kothmale and Doluwa.

Fig 5.5 No of Cases of Viral Hepatitis



5.5.5 Surveillance of Dengue Fever/Dengue Haemorrhagic 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 15,467 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 1999-2008 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
2008	612	2	0.33

Fig. 5.6 Dengue Cases in Central Province 1999-2008

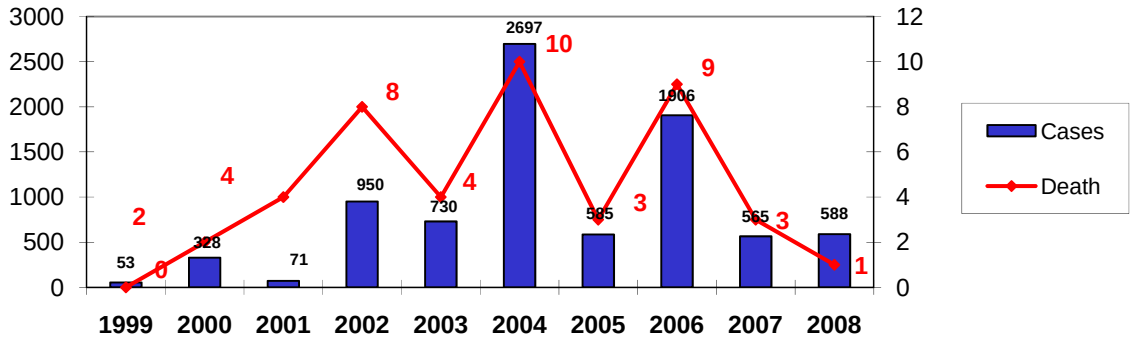
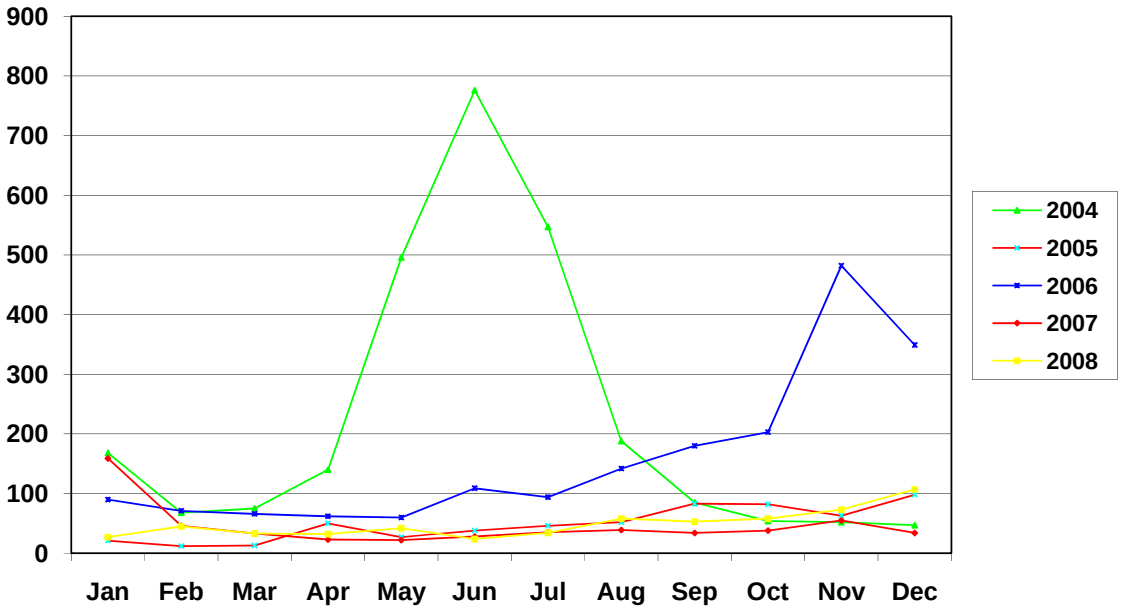


Fig. 5.7 Distribution of Dengue cases by Month in Central Province - 2004 - 2008



The MOH divisions which report 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 2008, a total 612 DF/DHF cases were reported from government health institutions and 2 deaths reported. Special Campaign on Aedes vector surveillance was initiated in 2000 and 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 investigations

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 Ukuwela in the Matale District and Akurana, Gampola, Gangawatakorale, Galagedera, 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 by MOH areas

	Aedes aegypti larval density			*Aedes albopictus* larval density		
MOH area	Container index	Premises index	Breteau index	Container index	Premises index	Breteau index
Matale District						
Dambulla	0	0	0	3.0-9.0	4.0-19.0	3-.0-18.0
Galewela	0	0	0	0-8.0	0-10.0	0-9.0
Matale	0-6.0	0-7.0	0-7.0	0-30.0	0-19.0	0-30.0
MC Matale	0-7.0	0-9.0	0-7.0	0-10.0	0-9.0	0-10.0
Rattota	0-1.0	0-1.0	0-1.0	0-11.0	0-9.0	0-11.0
Ukuwela	0-5.0	0-6.0	0-5.0	2.0-18.0	2.0-22.0	2.0-18.0
Yatawatta	0	0	0	1.0-5.0	1.0-2.0	1.0-8.0
Kandy District						
Akurana	0-5.9	0-2.0	0-5.0	1.0-4.3	1.0-3.0	1.0-4.0
Galagedera	0-8.8	0-4.0	0-4.0	0-2.8	0-2.0	0-2.0
Gampola	1-4.3	1.0-3.0	1-3.0	1-10.8	1.0-8.0	1-7.6
Gangawatakorale	0-7.8	0-6.0	0-7.0	2.8-7.9	2.8-7.8	2.8-9.8
Yatinuwara	0	0	0	0.9-5.94	1.0-5.7	1-5.7
Kandy MC	1-4.2	1.0-3.1	1-3.1	1-9.8	1.0-8.1	1-8.1
Kundasale	0-7.8	0-5.9	0-6.0	2.7-7.8	1.9-4.9	1.9-6.0
Pasbage	5.9-8.8	4.4-10.0	5.4-14	4.2-5.3	2-2.4	2-6.7
Udunuwara	0-4.1	0-4.0	0-4.0	1-5.4	1.0-6.0	1.0-6.0
Wattegama	0-7.6	0-5.8	0-5.8	0-15.5	0-4.8	0-7.0
Werallagama	0-3.03	0-1.0	0-1.0	0-7.5	0-4.0	0-4.0
Hataraliyadda	0-2.1	0-1.0	0-1.0	8.6-11.9	3-6.7	3-6.8

Larvivorous fish, *Poecilia reticulata* was applied in water storage tanks in the Province. However, the use of fish has declined in 2008 as compared to 2007. 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 by MOH areas

District	MOH area	No. of fish applied	
		2007	2008
Kandy	Gangawatakorale	1600	1500
	Kandy MC	1000	0
	Kundasale	600	250
	Medadumbara	500	0
	Wattegama	00	1300
	Werallagama	00	0
	Yatinuwara	00	0
Matale	Dambulla	8450	4303
	Galewela	1768	1697
	L/Pallegama	2106	1773
	Matale	2676	1475

A very few number of space spraying was carried out under special circumstances in the Province in 2008. 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/ Institution	2007			2008		
		No. of patients covered	No. of rounds	Amount of insecticide used (lit)	No. of patients covered	No. of rounds	Amount of insecticide used (ml)
Kandy	Akurana	00	00	00	0	0	0
	Galaha	00	00	00	0	0	0
	Gangawatakorale	03	03	1.5	0	0	0
	Yatinuwara	00	00	00	0	0	0
	Kandy MC	01	01	0.25	0	0	0
	Peradeniya	03	2.5	0	0	0	
	Kundasale	00	00	00	0	0	0
	Medadumbara	01	01	0.25	0	0	0
	Talatuoya	01	01	0.125	0	0	0
	Werallagama	02	02	0.5	0	0	0
Matale	Dambulla	00	00	00	0	0	0
	Galewela	00	00	00	2	1	500
	Matale	00	00	00	7	1	1000
	MC Matale	03	2	1.2	0	0	0
	Pallepola	00	00	00	0	0	0
	Rattota	00	00	00	0	0	0
	Ukuwela	3	3	1.2	3	2	1000
	Yatawatta	0	0	0	1	1	200

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 despite the negative publicity given by the press for suspected vaccine related deaths reported after the introduction of the pentavalent vaccine. This led to a temporary withholding of the pentavalent vaccine until the reported deaths were investigated both at country level and also by an independent international investigation team. Primary Healthcare staff need to be vigilant and ensure proper investigation of child deaths are carried out to report any suspected vaccine related death. However the coverage for antigens administered during school years is yet to reach the desired levels. The Hepatitis first two doses show a low coverage which may be due to the unavailability of the Hepatitis vaccine initially due to the change in the vaccine schedule from the pentavalent to the DPT + Hep B.

Table. 5.17 Trends on selected vaccine preventable diseases

Year	Tetanus		Whooping Cough		Measles		Encephalitis		Viral Hepatitis	
	Central Province	Total Sri lanka	Central Province	Total Sri lanka	Central Province	Total Sri lanka	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
2008	9	36	5	57	18	105	24	261	274	1930

Table. 5.18 Immunization coverage in the Central Province

	2007			2008		
Antigen/Dose	Number	% Coverage estimated births	% Coverage DPT 1	Number	% Coverage estimated births	% Coverage DPT 1
DPT 1	46,323	91.1	100.0	48,850	97.4	100.0
DPT 2	46,029	90.5	99.4	47,401	94.5	97.0
DPT 3	45,412	89.3	98.0	45,728	91.1	93.6
OPV 1	46,208	90.9	99.8	46,999	93.7	96.2
OPV 2	45,944	90.4	99.2	46,840	93.4	95.9
OPV 3	45,286	89.1	97.8	46,216	92.1	94.6
Hep B 1	46,318	91.1	99.9	32,149	64.1	65.8
Hep B 2	46,063	90.6	99.4	39,714	79.1	81.3
Hep B3	45,362	89.2	97.9	45,847	91.4	93.9
Measles	46,169	90.8	99.7	47,087	93.8	96.4
MR	45,167	88.8	97.5	46,359	92.4	94.9
DT 5 years	43,574	85.7	94.1	45,293	90.3	92.7

The reporting of adverse events following immunization (AEFI) has shown a gradual increase. The AEFI reporting in all 3 Districts have improved in 2008 as compared to 2007 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 2009.

Table. 5.19 Reporting of Adverse Events Following Immunization in Central Province

	2007			2008		
	Number	Percentage	Sri Lanka percentage	Number	Percentage	Sri Lanka percentage
Completeness	483	98.1	97.2	586	99.7	98.0
Timeliness	177	36.0	37.1	222	37.9	40.8
Nil Returns	172	34.9	46.2	176	30	37
Total no. AEFI	1085	*127.5	*94.5	1051	*121.9	*97.7
Abscess reported	116	*13.6	*18.1	73	*11.6	*14.7
Severe local actions reported	97	*11.4	*13.3	64	*10.1	*12.2

*** Rate per 100,000 doses**

5.7. Environment 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 on 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 2009. Water and sanitation coverage reported for the Province for 2008 was 64.2% and 80.6% respectively. During the year 4350 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. During the year the Ministry of Healthcare and Nutrition provided a subsidy of Rs. 15,000/= for the construction of 1500 toilets mainly in the estate sector to protect the water sources identified for the Hepatitis out break in 2007 and the enteric fever out break in the Walapane MOH area.

Table. 5.20 Water & Sanitation activities provided by Public Health Inspector

Indicator	2007		2008	
	Number	Percentage	Number*	Percentage
Number of Houses in the sanitation Register	528,971	-	533,198	
Number of houses with sanitary latrines	433,985	82.0	429,502	80.6
Number of houses without latrines	45,927	8.7	103,696	19.4
Number of latrines constructed during the year	4519	-	4350	
Number of houses with pipe borne water connection	245,777	46.5	241,755	45.3
Number of houses using water from protected and deep wells	113,529	21.5	100,974	18.9
Number of houses using water from unprotected and other sources	169,665	32.1	190,469	35.7
Number of public water supplies sampled	244	-	402	
Number of private water supplies sampled	33	-	33	
Number of wells chlorinated	2614	-	3957	

* Excluding information from MC Kandy and MOH Bambaradeniya which were not received

Food safety and hygiene activities reported during 2008 show that a gradual improvement in the rating of all types of food establishments. This needs to be further monitored at Divisional and District level in 2009. 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 increased in 2008 as compared to 2007. Details of Food safety and hygiene activities are given in the table below. A total of 1360 formal samples were sent by authorized officers in the Central Province of which 394 were found to be unsatisfactory. A total of 386 Prosecutions were done.

Table. 5.21 Food Safety & hygiene activities provided by Public Health Inspector

	2007	2008

	No. registered	Percentage	No. registered*	percentage
Registration of food handling establishments				
Factories	687		550	
A grade satisfactory	317	46.1	270	49.1
B grade fair	358	52.1	238	43.3
C grade unsatisfactory	12	1.7	42	7.6
Bakeries	837		689	
A grade satisfactory	329	39.3	310	45.0
B grade fair	419	50.1	319	46.3
C grade unsatisfactory	89	10.6	60	8.7
Hotel, Restaurants	1230		1121	
A grade satisfactory	563	45.8	526	46.9
B grade fair	482	39.2	463	41.3
C grade unsatisfactory	185	15.0	132	11.8
Inspection of Food handling establishments				
Number inspections	18452	-	21179	
Number served notice	894	4.8	862	4.1
Number prosecuted	118	13.2	179	20.8
Number convicted	74	62.7	101	56.4
Food Sampling				
Number formal samples taken	1122	-	1360	
Number unsatisfactory	306	27.3	394	29.0
Number prosecuted	226	73.9	386	98.0
Number convicted	101	44.7	236	61.1
Number of formal iodized salt samples taken	159		190	
Food seizures				
Number of food seizures	7130	-	5146	
Number of awareness prg. on food safety				
Traders	943	-	1059	
Public and other groups	2186	-	2597	

* Excluding information from MC Kandy and MOH Bambaradeniya which were not received

The area of food safety needs to be further strengthened in 2009.

Occupational Health activities reported show that 784 factories are registered with the Health sector. During inspections 570 defects were found of which 57 were referred to special units.

3837 Environmental pollution problems were reported in 2008 of which 93.4% were investigated by the PHI. 506 were referred for action while 3076 were settled.

238 volunteers were recruited in 2008. By the end of 2008, 5474 Volunteers were reported to be assisting in preventive Health activities in the MOH areas.

5.8 Health Promotion Activities

Health education is an 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 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.

Table 5.22 Health Promotion Activities carried out in the Central Province

Indicator	2007		2008	
	Number of Programmes	Number of Trained/ participated	Number of Programmes	Number of Trained/ participated
1-Public Health staff - B.C.C. Training	12	485	10	382
- I.E.C. Material production Workshops - Other	08	237	Nil 12	 1,250
2- Hospital H .E. - No. of HE units	18	68	07	82
- B.C.C. Training	03	135	04	130
- other			01	15
3- School H.E. - Seminars for students and teachers - Special Programs (ex. Quiz prog., Poster comp.)	159 03	17,817 130	95 04	16,105
4- Community - Awareness using Mobile van	146	8,716	204	18,442
- Exhibition	10	5,000	09	13,000
5- Government and other departments	20	562	15	737
6- Special days (Eg. World Health Day….) Activity - walk , Exhibition….	11	2,250	08	2,214
7- Health promoting village programme - leaders/volunteer training			03	135
- No. Programmes initiated			12	
- No. functioning			14	
8- HE material production & distribution	-	-		
–Material Publication/production - Item No			01	
Material distribution (from HEB and other) CDs				738
Leaflets				22,350
Posters				8,020
Other				
9- Operational Research	Nil		Nil	

Special programmes and exhibitions were conducted to mark special days such as World Health day, World Hand Washing day, Sisu Mahapola Exhibition. The health promotion activities need to be strengthened in 2009. The number of Health Education officers actively providing services is inadequate as 2 officers have been attached to other Departments on secondment. The health Promotion and NCD units need to be strengthened with the required multi disciplinary staff.

5.9 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.

In 2008, the 3 Food and Drug Inspector posts vacant were filled after a lapse of 6 years.

Table 5.23 Activities related to Drugs , Cosmetics & Devices in the Central Province

	2007				2008			
	Kandy	Matale	N-Eliya	Total	Kandy	Matale	N-Eliya	Total
No. of pharmacies	142	38	57	237	142	41	54	237
No. Registered	126	35	50	211	132	40	52	224
No Unregistered	16	3	7	26	10	01	02	12
Drugs								
No.of Manufacturing establishments	1		1	2	01	Nil	Nil	01
No. Licensed Renewal Retail	112	35	40	187	132	38	52	222
No. Inspected Renewal retail	112	35	40	188	526	41	54	621
Sampling								
Samples sent for analysis – Formal			4	4	10	Nil	Nil	10
Samples send for analysis - informal	9	8	6	23	07	5	05	17
No. Found unsatisfactory	1	4	1	6	02	Nil	Nil	02
No of items withdrawn/withhold	561	8	115	684	312	Nil	Nil	312
Quantity withdrawn/withdrawn (Tab/cap	57000		108000	165000	-	Nil	Nil	Nil
Quantity Failure Drugs Report by the D.R.A.	42	42	49	133	54	54	54	54
No of items withdrawn/withhold	510	3	402	915	561	03	70	634
No of batches withdrawn/withhold	25	2	72	99	24	05	25	54
Quantity withdrawn/withhold	57000		51000	108000	85000	13500	43755	142255
Flying Squad Activities								
No of flying squad Activities	7	8	7	22	21	16	12	49
Seizures Under the C.D.D. Act								
Unregistered	10	6	6	22	10	03	06	19
Prohibited	12	2	7	21	11	05	Nil	16
Smuggled			20	20	12	02	01	15
Expired	530	20	785	1335	540	40	60	640
Spoilt & Damaged	20	15	54	89	24	15	04	43
With state logo				0	Nil	Nil	Nil	Nil
Storing without a license	3	8	16	27	03	06	84	93
Others				0	0	0	0	0
Prosecutions								
No of prosecutions	11	4	9	24	06	09	04	19
No Convicted	8	3	11	22	05	05	04	14
No pending	3	1	3	7	01	04	Nil	05
Fines imposed(RS)	102500	15000	105000	222500	90000	35000	80000	205,000
Cosmetics								
No. of Manufacturing establishments				0	01	Nil	Nil	01
Seizures Under the C.D.D. Act				0				
Smuggled		5		5	15	Nil	Nil	15
Expired			137	137	Nil	Nil	Nil	Nil
Spoilt & Damaged				0	24	Nil	Nil	24
Devices								
No of Manufacturing establishments	1		1	2	01	Nil	Nil	01
Seizures Under the C.D.D Act				0				
Smuggled		2		2	05	Nil	Nil	Nil
Expired	45		155	200	Nil	Nil	Nil	Nil
Spoilt & Damaged	9		-	9	07	Nil	04	11
Educational Programmes								
Pharmacy Owners/Assistants	15		4	19	05	03	04	16
Schools	6	1	5	12	04	18	10	32
Others	9	13	5	27	01	Nil	13	14

The number of unregistered pharmacies have reduced from 26 in 2007 to 12 in 2008. The strengthening of the quality assurance of cosmetic, drugs and devices need to be strengthened in 2009. It is envisaged that in 2009 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.

5.10 Supportive Supervision

Supervision is an excellent opportunity to provide follow-up training, improve performance, and solve other systemic problems that contribute to poor quality service. Supportive supervision has been used to improve health worker performance globally. 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. The personal commitment of all programme managers and closer monitoring at Divisional and District level is required to ensure that supportive supervision is strengthened in the Central Province in 2009. The Province needs to initiate skill build training for all middle level supervisors. The supervisions of selected District level staff and MOOH is extremely low hence special attention is required at Provincial and District level to ensure supervision reports are submitted. The monitoring system of supervisions in the Nuwara Eliya District needs to be established. (see annex …. For detailed supervisions done by MOH level.

Table 5.24 Supervision of District level staff in the Central Province 2008

	Kandy		Matale		☼ Nuwara Eliya	
	Number	%	Number	%	Number	%
MO Planning	39	108	DNA		DNA	
MOMCH	61 (west) 32 (east)	169 89	24	67	DNA	
Regional Epidemiologist			35	97	DNA	
Regional Dental Surgeon	63	66	82	85	DNA	
Regional Malaria Officer	110	83	14*	25	------	
RSPHNO	87	121	60	83	DNA	
SPHID	63 (west) 60 (East)	105 100	27**	108	DNA	
PHI Rabies	63	131	04	8	DNA	

Source: PDHS office and RDHS office supervision information system

* Overseas leave for 6 months
** post vacant till August
☼ No information system to monitor the District level supervisions
DNA – data not available

The supervisions of Divisional level supervisory staff show a very low supervisions and low levels of supervision reports submitted by MOOH/AMOOH. This needs to be closely monitored at District level in 2009. The supervision reports submitted by SPHMM is extremely low and needs closer attention by the respective MOOH.

Table 5.25 Supervisions of Divisional level staff by District

	Kandy	Matale	N' Eliya	Total
Supervisions by DDHS/MOH	N=24	N=14	N=8	
No. PHMM supervised	559	290	142	991
No. of PHII supervised	146	77	39	262
No. SPHM/PHNS & SPHI supervised	84	45	18	147
No. of institutions supervised	163	85	55	303
% supervisions done based on estimate	66.1	24.6	52.9	61.7
* No. of reports submitted	181	91	DNA	
% of reports submitted	19.0	44.0		

Supervisions by Public Health Nursing sisters	N=22	N=9	N=4	
No. of PHMM supervised	838	283	195	1347
No. of SPHM supervised	50	12	04	66
No. of MCH/FP clinics supervised	875	271	322	1468
% of supervisions completed based on estimate	111.3	87.3	180.9	114.3
Number of reports submitted	1625	482	276	2383
% of reports submitted	92.2	85.2	53.0	82.7
Number of investigations conducted for infant deaths	187	57	58	302
Number of Local conferences conducted	221	96	22	339
Supervision by Supervising Public Health Midwife	N=20	N= 11	N=7	
Number of PHMM supervised	1500	951	403	2854
Number of clinics and weighing centres supervised	689	624	404	1717
% of supervisions completed based on estimate	91.2	119.3	96.1	100.2
Number reports submitted	1524	1099	493	3116
% reports submitted	69.6	69.8	61.1	68.2

Source: quarterly statement of supervisory staff – format C

* Reports received at the RDHS office
DNA – data not available

Chapter-6

6. SPECIAL ACHIEVEMENTS

6. 1 Productivity and Performance appraisal special achievements

Seven health institutions received awards at the National Productivity Awards ceremony 2008 and made the Provincial Department of Health Central Province proud. One institution received a commendation certificate by SLSI and the Office of the Provincial Department was adjudged the best Department at the Provincial Performance appraisal competition organized by the Central Provincial Council and also received the Chief Ministers challenge trophy for the best Department in Central Province. We urge all Preventive and curative institutions to take the challenge and compete at the above Provincial and National competitions in 2009.

6.1.1 Divisional Hospital Wattegama:

This hospital was established as an estate hospital in 1950. The concepts of productivity were gradually introduced to the staff at DH Wattegama in 2007 and by the end of 2008 a systematic improvement in the services and care provided at DH Wattegama was rewarded by achieving the merit award level at the Provincial Productivity awards 2008. Training of all staff on the concepts of a " job satisfactory workplace" zz;Dma;su;a /lshd ia:dkhla f.dvk.uqZZ and also providing a booklet prepared by the District Medical Officer, team building activities were some of foundations laid, to ensure the key areas of improvement which were seen in 2008. Some of the key areas of improvement of note were, the establishment of 24/365 Emergency treatment service , reorganization of the Medical records unit, strengthening infection control measures in the labour room and dental unit, a waiting area for visitors, establishment of multi religious worship place, renovation of the wards and establishment of a library facilities, providing screens for all hospital beds to ensure privacy, display of direction boards etc. etc. This was achieved not only with the support of Provincial Council funds but also with the support of the Hospital Development Committee, Municipal Council and also other well-wishers of the hospital. Several commendation letters have been received from the Wattegama Narandanda Maranadara and Social Welfare Society, Pathadumbara Justices of Peace Society , the Chief priest of the Vidyadharshana Pirivena, Pathadumabara Mediation Board, Pathadumbara Government Pensioners' Welfare Society, Wattegama Mediation Board and Wattegama Central College.


Discarded Food
Tin & Metal
Glass
Plastic
SHARP

6.1.2 Divisional Hospital Kadugannawa:

This hospital was established as a Rural hospital in 1947. The concepts 5S and productivity were gradually introduced since 2006 . During the year 2008 the hospital has reached the merit award level at the Provincial Productivity awards and also was awarded a commendation certificate by the Sri Lanka Standards Institute.

Continuous training on productivity and team building has made it possible for the hospital to reach this level.

6.1.3 Divisional Hospital Agarapathana:

This hospital was established in 1890 as an estate hospital. This hospital is located in a remote estate area. The District Medical officer and staff introduced the basic 5S and gradually introduced the productivity concepts from 2007. By the end of 2007 the hospital had reached a level that they received a "merit certificate" at the National Productivity awards. This stimulated all the staff to strive for a higher level and in 2008 with the support of the Hospital Development Committee the entire hospital was refurbished with the support of Health Department, other Government and Non Government organizations, private sector and the general public support. Patient welfare measures such as having separate dinning facilities in each ward, children's play area, strengthening of a patient friendly care, introduction of a systematic waste management system, medical examination of all staff, initiating tamil classes for staff who were not fluent in Tamil with staff welfare and training in the areas of productivity. The hospital was rewarded for all the hard work by reaching the 2nd place level at the National Productivity awards Provincial level and was placed 3rd at the National Productivity awards.

6.1.4 District Base Hospital Rikillagaskada:

This hospital was established in 1951 and upgraded as a DBH in 2001. The team at DBH Rikillagaskada gradually introduced team and productivity concepts built on the initial implementation of the 5S in 2008. Most of the development activities were implemented with the support of an active Hospital Development Committee and support obtained through the Government, non government and well wishers. Several special activities such as making the hospital patient and staff friendly, outreach specialist care, Garbage separation and disposal, strengthening water supply and distribution, strengthening patient welfare measures and patient care in the hospital was rewarded in the very first year by reaching the merit level at the National Productivity awards ceremony.

6.1.5 Medical Office Of Health Hatharaliyadda

The concepts of 5S and productivity were introduced gradually from early 2008. The MOH Dr. Sujeewa Rathnayake with his experience in ensuring that his previous duty station MOH area Bulathkohupitiya, in the Kegalle District, reaching the level of special merit at National Productivity awards 2007 and being placed third in the All Island Health excellence awards in the preventive health category, was able to implement several team building, productivity and innovative programmes in the MOH area Hatharaliyadda, which was rewarded in their very first year by reaching the Special merit level in the Provincial Productivity awards in 2008.

Some of the key activities introduced for pregnant mothers were introduction of a Kick count chart, provision of nutritious food at clinics, awareness on positive thinking and productivity , card with all items required for delivery, a special file for each mother, basic investigations done at each field clinic. Post natal clinics by MOH after one month of delivery, all infants examined by an MO at 2,4,6,9 months and children at 18 months and 3 yrs was introduced. All School Medical Inspections were completed within the first 3 months which reflects the priority given for this activity. Health promoting school concept was promoted and awareness on reproductive health issues, personal hygiene, life skills for school children and special awareness for school canteen owners and food providers on food safety hygiene and National school canteen policy was promoted. All preschool children were medically examined while ECCD and nutrition programmes for preschool teachers were conducted. All communicable diseases notified were investigated within 7 days and appropriate action taken to minimize spread, of these diseases. Special awareness and entomological investigations to detect and monitor breeding of mosquitoes with community actions through shramadana , awareness and activities with Grama Seva, Samurdhi , Civil Defense Committee and school children as a mosquito control force was successful in controlling Dengue. Non Communicable Diseases screening initiated from the health staff and later expanded to teachers other government workers was initiated. water sampling more than planned, occupational health programmes in all 3 factories, food awareness programs , Special programmes for newly married couples, women in their first pregnancies , complementary feeding, nutrition demonstrations and special display of food items available locally, introduction of implanon as a FP method, adolescent health programmes, active ageing programmes were some of the other special activities initiated. Productivity and 5S concepts have been expanded not only to all clinics, All PHM offices, All PHI offices but also to grocery stores, pharmacies and houses.
Staff motivation programmes and team building programmes throughout the year play a major role in keeping the staff morale high.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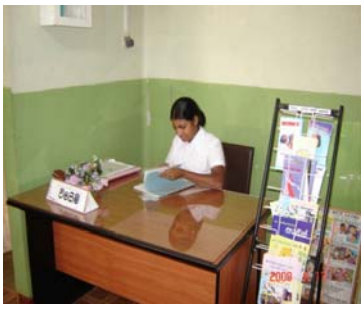
P.H.N.S
P.H.I

6.1.6 Medical Office of Health Rikillagaskada

A complete quality improvement programme was initiated in 2008 with the introduction of 5S in the MOH office and surrounding environment. Later the concept was expanded to clinics. Change of Clinic times, an appointment scheme to reduce waiting time and congestion, providing telephone numbers of the PHMM and MOH to mothers to be contacted for health advice, specific time for all PHMM, PHII to remain in office for the

public to meet, meditation programmes, expanding all investigations to field clinics, ECCD activities, increasing weighing centres, women's groups, getting more food supplements to be given to those below –2SD, special clinic for the children with GF, nutritious meal for mothers attending clinics, active ageing programmes, special family planning programmes, improved food safety measures, environment health measures, staff motivation and team building activities were some of the innovative measures adopted by the MOH team. Green productivity measures such as reusing envelopes, Production of envelops from thriposha bags,reduce the use of polythene and reduce wastage of water and electricity were also introduced. Productivity concepts are now being promoted from office to be implemented in the homes of the staff and others. These activities implemented were rewarded when the MOH office reached the level of second place in the National Productivity Provincial awards and also was awarded third place in the National Productivity awards 2008. Only nine health institutions in Sri Lanka reached this level which also included DH Agarapatana from the CP.



6.1.7 Office of the Provincial Director of Health Services

Productivity concepts were gradually introduced to staff, through technical presentations and field/hospital visits to show the success of already implemented productivity programmes. The implementation of basic 5S in the office was with the support of Agarapatana Premium export Lanka PVT Ltd. Mr. Gamini Warnasuriya well known for promoting productivity in the Central Province, assisted the office in the introduction and strengthening of the productivity concepts and supports the office as the external facilitator. The areas that were looked into was to make the office environment more "staff and client friendly" , changing the staff attitude of accepting change, positive thinking and attitude, getting more "work space" for the office, Team building activities, competitions among work units, establishment of a curative care unit with staff and facilities. The end of the year staff get together with "peduru sajaya", establishment of a separate welfare society for the office and other team building activities were introduced.

Within the first year the Provincial office was able to receive a special merit award at the National Productivity- Provincial awards 2008. The office was adjudged the best Department at the Provincial Performance Appraisal competition organized by the Central Provincial Council in the same year and also received the Chief Ministers challenge trophy for the best Department in the Central Province.

Chapter -7

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

Type	2007	2008
PTB smear +ve	507	531
PTB smear -ve	471	392
EPTB	319	308
Total	1297	1231

Total number of new Tuberculosis cases was decreased in year 2008 compare to 2007. Number of smear negative cases and extra pulmonary cases were decreased in 2008 compare to 2007, while smear positive number increased compare to 2007.

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

District	Estimated target	2007	2008
Kandy	389	303	318
Matale	135	89	127
N-eliya	211	126	86
Province	735	518	531

Case detection rate is below the estimated targets in both years in all three Districts and it has increased in year 2008 in Kandy and Matale Districts and decreased in Nuwaraeliya District compare to 2007.

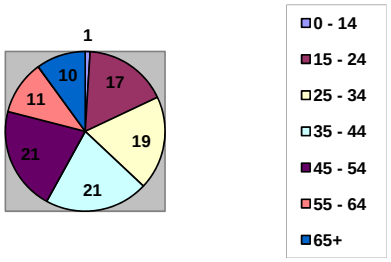
Table. 7.3 Distribution of new smear positive cases by sex

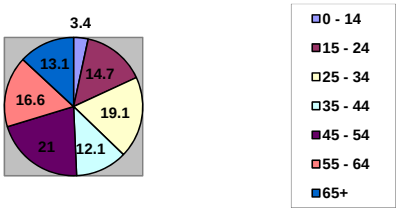
District	2007		2008	
	Male	Female	Male	Female
Kandy	67.7	32.3	62.3	37.7
Matale	79	21	77.2	22.8
N-eliya	63	37	58.1	41.9
Province	69.9	30.1	65.2	34.8

Percentage of females among new smear positive cases has increased in all three districts compare to year 2007. It was highest in Nuwaraeliya District.

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

2007





2008

Percentage of new smear positive cases among 0 – 14 years , 55 – 64 years age categories and over 65 years age category have increased in 2008 compare to year 2007.

Table. 7.4 Distribution of new cases of TB by District

	2007	2008
Kandy	864	769
Matale	195	253
Nuwaraeliya	172	180
Province	1231	1202

Number of new cases of Tuberculosis diagnosed during year 2008 has decreased in Kandy District, while in the Matale and Nuwareliya Districts the number of new cases detected has increased compared to 2007.

Table 7.5 Clinic attendance

Category	2007		2008	
	Number	%	Number	%
Referred	7129	30.6	7458	26.2
Self referred	10,475	44.9	14116	49.6
Contacts	735	3.1	2392	8.4
Medicals	4996	21.4	4516	15.8
Total	23,335	100	28482	100

Self referred cases to clinics in the Province have increased compare to year 2007. This is 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. Attendance of contacts also doubled compare to year 2007.

Table 7.6 No of investigations carried out and results

	2007	2008
No of smears examined	26,288	25838
No of smear positive slides	1149	1175
No of smear negative slides	25,169	24183
No of X rays carried out	24,446	13610
No of films used	24,514	14441

Number of smears examined was decreased while slide positive rate in all three clinics in the province has increased compare to year 2007. Number of X rays carried out has markedly decreased in 2008 compare to the previous year while the wastage of films was increased from 0.3% in 2007 to 6.1% in 2008.

7.2 Mental Health Services

In the early 90s mental health services were only available at General Hospital, Kandy (GHK) and Teaching Hospital, Peradeniya (THP). Anybody with any mental health problem from all parts in the CP had to come to GHK or THP to receive care which was a burden to the families.

In 1994 the consultant psychiatrists both at THP and GHK had a vision to take the mental health services closer to the people. As the first step of moving mental health services to the periphery a medium stay Mental Health Rehabilitation Hospital was established at Deltota in 1995 called "Sisila". During the year 2000, the Provincial Department of Health Services CP was the first Province to identify mental health services as a priority. The establishment of a multi-sectoral Provincial Mental Health Steering Committee (which included technical staff from the Provincial Department of Health, Consultant psychiatrists at THP and GHK, Nivahana) and the Community Mental Health Resource Centre (CMHRC) to facilitate the coordination of mental health services for the Central Province was instrumental in expediting the expansion of mental health services to the remote areas in the Province.

Functions of the CMHRC were as follows:

1. Training of health staff
2. collection to Statistics
3. Formulation of various mental health policies
4. Research and studies
5. Monitoring and evaluation activities in the community
6. Formation and maintenance of links with other sectors
7. Eg: Social services, education etc.
8. Organizing regular management meetings
9. Acting as the mental health focal point in the Province
10. Mental well being promotions
11. Public education

Mental health clinics were established in the five secondary care institutions namely BH Matale, BH Nuwara Eliya, BH Gampola, BH Dambulla and BH Nawalapititiya after training a few doctors interested in mental health from each hospital. In 2001 The Ministry of Healthcare appointed medical officers of mental health (MOMH) to these base hospitals.

In the year 2000, a team of multi disciplinary master trainers were trained for the Central Province. These trainers trained over 1200 primary health care staff of CP during the next 02 years.

During the same period a patient referral and back referral system was established using specific forms developed in the Province. These forms are used to refer patients between tertiary, secondary and primary levels. Eg. When a patient discharged from the hospital needs follow up and supervision in the community, a referral form is filled and posted to the MOH of the area, who in turn will direct the respective PHM to go and do the needful.

In 2002, the first alcohol treatment unit in the Central Province was opened at Mampitiya hospital close to Peradeniya with the capacity for 10 patients. Since the hard drugs rehabilitation centre run by the National Dangerous Drug Control Board (NDDCB) was situated in close proximity, the services of de-addiction counselors could be obtained easily.

In year 2003 the second medium stay MH rehabilitation hospital was opened in Leliambe Hospital, Matale.

Since 2005, training of medical officers from District hospitals was done to initiate the establishment of Mental Health clinics even in divisional level hospitals. This was done to ensure that patients could get treatment closer to their homes while reducing the unnecessary patient clinic load at tertiary and secondary level hospitals.

During 2008, the third medium stay Mental Health rehabilitation hospital was opened at the Maldeniya hospital close to Nawalapitiya. This ensured that each District had at least one medium stay Mental Health rehabilitation hospital in the Central Province. Specific admission criteria for medium stay Mental Health Rehabilitation Hospitals were developed in the Province.

The need for a longer stay rehabilitation services or half way home was identified as a need and the first unit was established in the Muwandeniya hospital in the Matale District.

The Province has identified another group of patients who are either much recovered or fully recovered, but do not have a place to go in the society. The need for the construction of a sheltered accommodation at DH Muruthalawa has been identified and the Provincial Department of Health is looking for a donor organization to complete it.

During 2008 two coordinators were appointed to Matale and Nuwaraeliya Regional Director of Health Services areas to strengthen the coordination in respective Districts. 'Nivahana society" a NGO actively supports the mental health programme in the Province.

The mental health services being implemented in the Central Province have been identified as a model for other Provinces in Sri Lanka. It is planned to establish District Mental health steering committees from 2009.

Table .7.7 No of functioning clinics by District

	2007	2008
Kandy	18	21
Matale	10	10
Nuwaraeliya	12	7
Province	40	38

Number of functioning clinics in the Kandy District has increased with appointment of new Medical Officers (Mental Health) to the Base Hospitals and selected District Hospitals in 2008 compare to year 2007.

Table 7.8 No of new cases referred by category

	2007		2008	
Category	Number	%	Number	%
From DH	426	72	1561	29
By PHM	103	18	2847	53
Other	62	10	967	18
Total	591	100	5375	100

Though number of Referrals from District Hospitals has increased in 2008 as compared to 2007, as a percentage it shows a marked decrease due to the marked improvement of referrals by the Public Health Midwives in the field.

Table 7.9 Diagnosed new cases by type of disease

Category	2007		2008	
	Number	%	Number	%
Depressive	1192	40	1151	35.1
Psychotic	645	22	658	20
Neurotic	229	8	228	6.9
Substance misuse	345	12	334	10.2
Childhood	92	3	59	1.8
Mental retardation	76	2	80	2.4
Other	392	13	774	23.6
Total	2971	100	3284	100

In both years, nearly two third of the newly diagnosed cases in the Central Province comprises of patients with depressive and psychotic disorders. However there is a reduction of new cases of depressive disorders detected in 2008 compare to year 2007. This may be due to improvement of diagnosis by the Medical Officers who had undergone training in Mental Health

Table 7.10 No. of persons trained by category

	2007	2008
Medical Officers/ RMO	46	70
Other Health staff	378	766
Grama/ Samurdhi Niladhari	00	75
Preschool teachers	184	00
School teachers	239	65
Volunteers	265	75
School children	864	238
Religious leaders	274	80
Heads of the Departments	28	00
Police officers	00	125
Total	2076	1494

Mental Health Resource Centre (MHRC) has trained nearly 1500 people in the Central Province in 2008. This includes school children, volunteers, other government employees and members from various categories of health staff. During 2007, training of Religious leaders was undertaken as a new venture. The MHRC has identified the need to strengthen the training of health workers through the development of skills of the different categories of staff. In year 2008 MHRC have done informal training programmes for field and institutional health staff, figures of which have not been included in the above.

7.2.1 Sisila Rehabilitation and Training Hospital, Delthota.

'Sisila' was opened in 1995 to provide mental rehabilitation services for patients in the province. It was pioneered by consultant from Kandy and Peradeniya Hospitals with the objective of expanding the spectrum of mental health management restricted to acute care at large hospitals to that of social and occupational rehabilitation that established the patient's psychological well being.

The unit was started in the old plantation hospital buildings (former Delthota District Hospital), with the support of the Australian High Commission, the Nivahana Society of Kandy, and Voluntary Service Overseas. Being the first such unit in the country, initially there was an opposition from the local community who were reserved about having a mental institute in their town. Fifteen years on, however, the institute has transformed into a well known, accepted and contributing part of the community.

As well as a catering to the resident patients, it holds a fortnightly psychiatric clinic for outpatients. Most resident patients stay for between 6 and 12 months in the centre.

Most of the residents are referred from the acute psychiatric wards at Kandy and Peradeniya Teaching Hospitals. Many of the patients are those who had lost personal, occupational and social skills consequent to the repeated episodes of mental illnesses such as schizophrenia, bipolar disorder, or severe depression.

Rehabilitation at Sisila is based around a structured day involving everyday tasks such as sweeping and cooking, religious activities, personal care activities, outdoor work such as agriculture or caring for the cow, and indoor work such as making rugs or pharmacy bags. In the afternoons and evenings there are recreational, cultural, sports and educational activities for which all residents are encouraged to participate. These include life skills sessions on topics such as money and budgeting, completing forms, and using local facilities.

All cultural and national festivals are celebrated at the centre. World Mental Health Day is celebrated with an exhibition involving the display of awareness raising banners and posters in Delthota town.

An important part of rehabilitation involves gaining or regaining skills and confidence to function in the community through adequate exposure. This is facilitated through short or long trips. Residents are encouraged to go to Delthota for the newspapers or such errands. They regularly participate in the new Mental Health Consumer Action Forum held at Kandy Hospital, which is for patients to get together to express their views and for self help activities. The programme also includes training at the local Vidatha in Delthota which enables the patients to be productive through engaging in a job or by being a better help at home once discharged.

Family involvement is crucial to the success of rehabilitation. This is made possible through conducting monthly Relatives' Society meetings and encouraging regular family visits. Through helping out with work parties, family members are able to learn about mental illnesses and thereby support the family member to re integrate

into society. Families as well as residents benefit from education about psychiatric medication and other health topics.

Since October 2008, Sisila has had a volunteer from Voluntary Services Overseas, working with staff and residents to improve the rehabilitation practices and processes. This volunteer, Jenny Hulin, was a mental health social worker in the UK and is here for 2 years. She has been carrying out staff training in both knowledge and attitudes, and has established regular staff and residents' meetings. Under her directive there have been improvements to the procedures carried out, such as formulation of admission and discharge checklists, care planning, discharge planning, daily and weekly planning.

With funds from VSO and the use of local resource people from Small Industries and elsewhere, staff and residents have been trained in new rehabilitation activities such as hana and thala kola, recycled paper, and improved techniques for agriculture and horticulture. It is planned to integrate these activities into the regular programmes, to improve income generation capacity of the patients.

Staff and residents from Sisila participate as appropriate in District and Provincial Mental Health meetings, and in VSO sponsored meetings and workshops which are part of the EC funded project 'Supporting and Developing Rights –based Mental Health Services in Sri Lanka'.

Over 2008 the following infrastructure was improved.

1. Refurbishment of the old main kitchen
2. Renovation of the small toilet block
3. Building a waiting area and a toilet for the Out Patient Department
4. Money donated by supporters in the UK has been used to refurbish a small kitchen which is used for small group training.

Additionally, improvements to the institute library have been carried out.

The support from residents' families, in the form of regular donations of treats for the residents, gifts such as water boilers, sponsoring of leaflets or other items, and total repainting of the male dormitory has helped to boost the morale of the patients as well as the staff.

Resident capacity:
22 male, 17 female

Consultants and registrars from Kandy and Peradeniya Hospitals visit regularly.

7.2.2 Alcohol Rehabilitation Unit of Mampitiya

The Alcohol Rehabilitation Unit of Mampitiya was established on 3rd of December 2001 in an unutilized ward in the hospital as a special unit. It is the first alcohol rehabilitation unit established in Sri Lanka.

The unit was established as a proposal of Dr. A.K. Rodrigo, Consultant psychiatrist at TH Peradeniya with the help of the former Provincial Director of Health Services, Dr. Ananda Gunsekera, and the Medical officer in charge of the Mampitiya Hospital Dr. Cumudini Rathnayake.

In June 2004 a medical officer mental health was appointed to the unit with the subsequent commencement of follow up clinics for patients starting by August 2004. The Community Mental Health center was commenced in July 2007 in a separate building. To improve the privacy for patients, the consultation rooms were separated for medical officer, nursing officers etc. By the end of 2007 the construction of the playground, the pond, and the fence around the unit was completed adding aesthetic value and security to the premises. Adjoining the main unit, a separate office for the programming and planning officer and a rest room for the nursing officers were completed by January 2008. An admission policy and a management protocol were introduced in September 2007 to streamline the activities that were carried out in the unit. During January 2008, two follow up clinics were started to manage psychiatry patients and alcohol dependent patients separately.

Over the years Mampitiya alcohol rehabilitation centre has been catering to an increasing number of patients as is evident from the rise from 120 in 2002 to 340 patients in 2008.

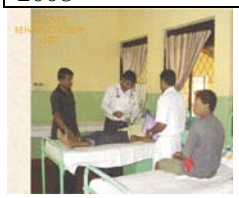
<u>Services provided for inpatients</u>

- Alcohol detoxification
- Motivational interview
- Investigations (with the help of TH Peradeniya)
- Counseling
- Family meetings
- Health educational programs
- Life competencies
- Religious activities
- Refer to SocialServicesDepartment
- Referrals to other hospitals
- Library service for patients
- Sports activities

<u>Services provided for clinic patients</u>

- Follow up review
- Medications
- Referral to hospitals
- Counseling

Year	New	Follow up	Total
2007	123	628	751
2008	166	605	771



7.2.3 Psychiatric Services at TH Kandy and TH Peradeniya

Kandy Psychiatric Department was opened in 1966. It was the first Psychiatric Unit to be established in the country in a General Hospital apart from the mental hospitals in Angoda/ Mulleriyawa. Initially there were two units of which one was under the Health Department and the other was managed by the Peradeniya Professorial Unit. The units have male and female ward facilities with 30 beds each. In 1980, the professorial unit moved to the Teaching Hospital, Peradeniya and only one unit functioned until 2006 by which time the second unit was recommissioned with the appointment of a second consultant.

Currently, Kandy Psychiatric Department conducts 03 general clinics, 01 child and adolescent clinic and a de-addiction clinic.
There is a day center, where occupational therapy is provided on 2 days a week. On fridays a part time counselor from the National Youth Council provides this service while the voluntary counseling service provides it every Wednesday.

Psychiatric social work is provided by 02 psychiatric social workers (PSW). They do home visits and also help patients to sort out social problems. The unit liaises with the Social Service Department to obtain self employment allowance, housing allowance etc. for patients. Family meetings and music therapy programs are organized by PSWs once a month. School children in the Kandy area in rotation take part in these music programs in the wards.

The Department holds a Sinhala/ Tamil New Year celebrations annually in a ground outside the hospital. While being a popular annual event amongst patients, their family members and the staff, it has also being subjected to a wide media coverage.

Another specialized service provided by this Department is Forensic Psychiatric service with a large number of persons being referred from the courts for forensic psychiatric reports.

The unit also attends to many difficult patients tranferred from several districts for specialized management.

Psychiatric Department Kandy is an accredited unit for postgraduate training in MD Psychiatry, Diploma in psychiatry and Psychiatric Training for general MD trainees.

Psychiatric Social work unit

Reasons for home visits

1. Educate family members about the illness and to convince them of the advantages of good drug compliance
2. Follow up clinic patients so as to avoid recurrent admissions
3. To meet Government Officers of other departments in the patients area to inform about the patient and to get the social support
4. To make management plans
5. For problem solving counseling
6. To get information from teachers through school visits
7. To educate teachers about illness
8. To get a complete history
9. To mobilize social support in the patient's vicinity

Table 7.11 Patients Treated by type of Disease

Diagnosis	Number
ADHD	10
Alcohol Dependence	45
Anxiety	28
Bipolar Affective Disorder	72
Childhood Depression	11
Conduct Disorder	13
Depression	300
Dementia	10
Dissociative Disorder	15
Hyperactive Behaviour	08
Mental Retardation	13
OCD	35
Phobias	26
Post Traumatic Stress Disorder	06
Schizophrenia	98
Sexual problems	20
School refusal	15
Delusional Disorder	29
Postpartum Psychosis	09
Admissions	M – 1175 F – 835

Special Programmes

No of home visits by PSW	192
Musical therapy Programs	09
Family meetings	13
General Counseling - new clients	288
Alcohol Counseling	65
Occupational Therapy	M - 2408 F – 2814

7.2.4 Psychiatric Services at TH Peradeniya

Since 1980, Peradeniya Teaching Hospital has been housing the Professorial Unit of the Department of Psychiatry, Faculty of Medicine, University of Peradeniya. The total number of patients seen in the unit in 2008 stands at 33,658 of which 1,339 had been new patients and 32,319 had been follow up patients.

Table 7.12 Patients Treated by type of Disease

Diagnosis	Number
Bipolar Affective Disorder	11
Childhood Disorders	111
Depression	142
Dementia	14
Mental Retardation	170
OCD	09
Social Phobia	05
Schizophrenia	07
Delusional Disorder	07
Psychosis	03
Migrain	02
Mania	30
Others	32
Total	543

Table 7.13 Special Clinics

Clinics 2008	New patients	follow up patients
Alcohol Clinic	90	368
Sex Clinic	53	262
Child Psychiatric Clinic	365	4,846
Mental Retardation Clinic	170	3,250
Adult Clinic	661	23,593
Total Number of new patients	1,339	32,319

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 7.14 Clinic attendance and no of new diagnosed cases by District

	Kandy		Matale		Nuwaraeliya	
	2007	2008	2007	2008	2007	2008
Total clinic attendance	3898	9312	4903	3951	3055	2789
Syphilis	52	80	06	08	07	09
Gonorrhea	28	21	02	01	08	02
NGU/NGC	175	178	01	03	08	01
Genital Herpes	122	126	17	39	04	06
Candidacies	183	187	08	13	21	05
Other STI	196	190	18	41	03	02
Non STI	462	454	74	41	-	93
Total No of cases	1218	1236	126	146	51	118

Total clinic attendance in Kandy Districts has increased markedly in year 2008 compared to 2007 while the number has decreased in Matale and Nuwaraeliya Districts. Majority of new cases includes Candidacies, Genital Herpes, Syphilis,Gonorrhea and other STI.

Table 7.15 Serology test for Syphilis

	2007		2008	
	Total VDRL	VDRL +ve	Total VDRL	VDRL +ve
STI clinic attendees	2711	55	3760	63
Antenatal mothers	28,449	7	34298	6
Pre-employment	6004	4	3114	-
Other	6419	-	3161	31
Total	43583	66	44333	100

Number of serology tests for Syphilis (VDRL) carried out among antenatal mothers, and clinic attendees has increased in year 2008 compared to 2007. Number of confirmed cases also increased compare to year 2007.

Table 7.16 Serology tests for HIV

	2007		2008	
	Total HIV tests	HIV +ve	Total HIV tests	HIV +ve
STI clinic attendees	3837	13	2937	03
Other	1680	-	2958	02
Sentinel sites	662	03	251	-
Total	6179	16	6146	05

Number of HIV tests done at clinics has decreased in 2008 compared to the previous year. The number of diagnosed cases of HIV/AIDS has decreased by more than 3 times compare to year 2007.

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 2008 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 58.9% from 54.0% of the dog population. 11,769 female dogs were given temporary birth control injections.

In early 2008 the Ministry of Healthcare and Nutrition identified dog sterilization as a key strategy to eliminate rabies from Sri Lanka and requested Provincial Departs of Health to identify a suitable strategy to implement this strategy. The

Department of Animal Production and Health and the Provincial Department of Animal Production of Health did not have the resources nor a strategy to assist the Department. Hence the Department requested the support of Non Government Organizations involved in humane control of dog populations. A NGO named "Association of Veterinarians for Humane Management of Animal Population" came forward to assist the Province in this Herculean task thus making the Central Province the first Province to take up the dog sterilization programme on a large scale.

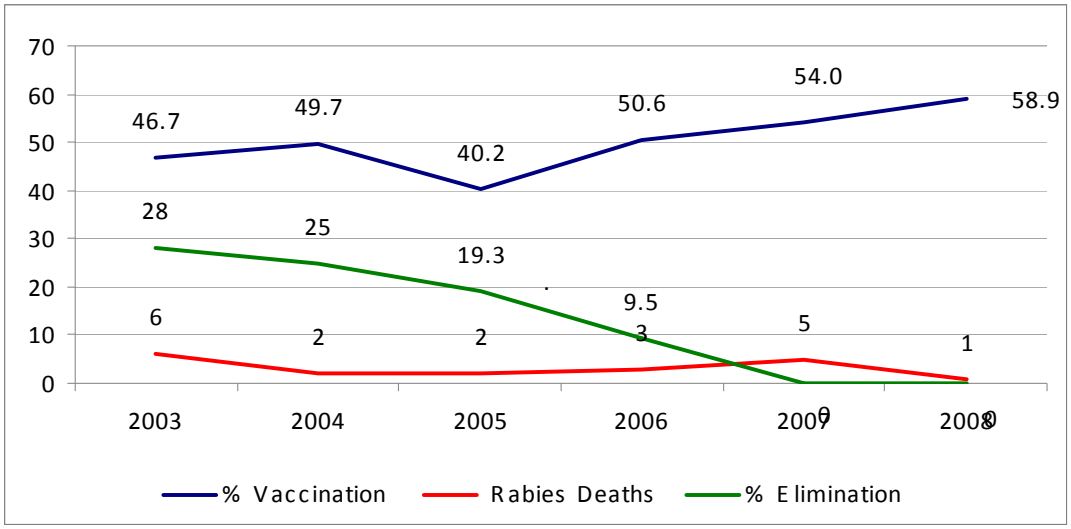
The Primary healthcare staff in MOH areas with the support of the District and Provincial level technical staff , were able to get 46,003 sterilizations performed during the year, which was more than the initial target of 30,000. The Ministry of Healthcare and Nutrition have identified the programme in the Central Province as the model for other Provinces and Districts to replicate. The sterilization programme was conducted despite various challenges and obstacles. Special mention should be made of the veterinary surgeons who assisted in performing these sterilizations under extremely difficult conditions sometimes doing surgery late into the evening and traveling to all parts in the Province

Table. 7.17 Rabies Situation and Control activities by Districts in the Central Province.

Activity	2007			2008		
	Estimated DP	Number	%	Estimated DP	Number	%
Dog Vaccination						
Kandy	168417	97302	57.8	170030	97133	57.1
Matale	58898	31683	53.8	59519	46227	77.7
Nuwaraeliya	91425	43257	47.3	92095	45944	49.9
Central Province	318740	172242	54.0	321644	189304	58.9
Dog sterilization						
Kandy	50525	452		51009	10196	20.0
Matale	17669			17885	15345	85.8
Nuwaraeliya	27427			27629	20462	74.1
Central Province	95621			96523	46003	47.7
Dog Birth control (temporary method)						
Kandy	40420	6391	15.8	40807	6048	14.8
Matale	14135	4389	31.1	14284	3829	26.8
Nuwaraeliya	21942	2445	11.1	22103	1892	8.6
Central Province	76497	13225	17.3	77194	11769	15.2
Human Rabies Deaths		05	*0.20		01	*0.04

- **Incidence rate per 100,000 population**

Fig. 7.2 Rabies Control Activities



The success of the sterilization programme was evident with the reduction of rabies deaths to 1 in 2008 from 5 in 2007. The number of dog bites, the use of Anti rabies vaccine and Anti rabies serum also shows a marked decline. (see table below) This clearly shows that Humane dog control programmes and also responsible dog ownership should be strengthened in the Central Province further 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 strengthening the provision of the sterilization programmes further in 2009.

Table-7.18 Post exposure prophylaxis used in the Central Province 2004-2008

		2004	2005	2006	2007	2008
Human ARV	No. doses	55,457	38,692	69,784	117,923	* 25,720
	Approx. cost Rs. Million	5.9	4.1	7.5	12.7	16.5
Human ARS	No. doses	6325	3316	4573	10,992	* 14,580
	Approx. cost Rs. Million	4.1	2.1	2.9	7.1	7.2
Total cost	Rs. Million	10.0	6.2	10.4	19.8	23.7

*** Number of vials**

Please note that the cost of a ARV vial increased from Rs.290.07 cts in 2007 to Rs.640/= in 2008 , while the cost of a vial of ARS has reduced from Rs.529.26cts in 2007 to Rs. 497/= in 2008.

Table 7.19 The use of Human ARV and ARS by hospital in the Central Province 2008

	Human ARV		Human ARS	
Institution	Number of vials	percentage	Number of vials	percentage
TH Kandy	6440	25.0	5581	38.3
TH Peradeniya	2976	11.6	2645	18.2
TH Gampola	2134	8.3	380	2.6
DGH Matale	2859	11.1	830	5.7
DGH Nawalapitiya	2226	8.7	2323	15.9
DGH Nuwara Eliya	3111	12.1	1095	7.5
DBH Dambulla	1629	6.3	1717	11.8
DBH Rikillagaskada	1657	6.4	Nil	0.0
DH Udadumbara	145	0.6	Nil	0.0
DH Galewela	618	2.4	Nil	0.0
DH Theldeniya	581	2.3	Nil	0.0
DH Madolkele	498	1.9	Nil	0.0
DH Walapane	646	2.5	Nil	0.0
DH Udapusselawa	200	0.8	Nil	0.0
Total	25720	100.0	14580	100.0

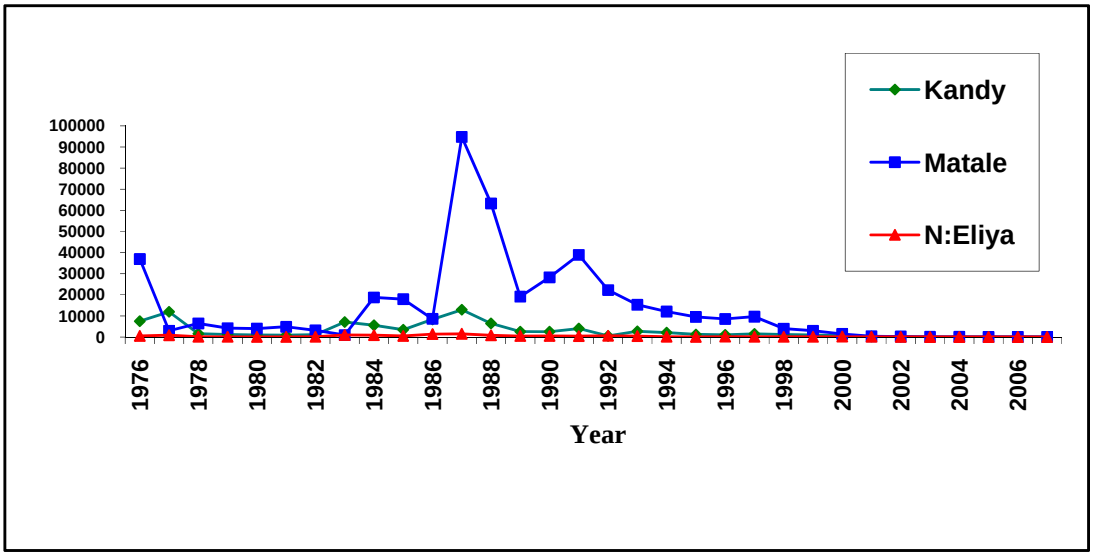
Dog Vaccination programme

Dog Sterilization

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 of 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.

Fig. 7.3 Trends of malaria cases reported by District from 1976 – 2008



Since April 2008, the Anti malaria programme embarked into pre elimination phase of malaria in Sri Lanka in early. Within this concept, the Central Province was placed as an area to maintain zero level indigenous transmission of malaria. Thus, the objective of the malaria control programme in the Central Province is "to maintain zero level transmission of malaria in the Central Province".

Epidemiology of malaria in the Central Province

The number of malaria cases reported from 2001- 2008 in Kandy, Matale and Nuwara Eliya districts are shown in Table 7.20

Table-7.20 Number of malaria cases reported by districts from 2001-2008.

Year	Kandy	Matale	Nuwara Eliya	Central Province
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	4*
2008	17*	26*	4*	47*

*** Contracted disease out side Province**

In the year 2008, 28503 blood smears were collected in the Kandy district, of which 16 were *P. vivax,* and, 01 was a mixed infection with *P. vivax* and *P. falciparum*. All these cases have been contracted the disease outside the province, but treated at the medical institutions in the Central Province. In the Matale district, 16973 blood smears were collected and 26 positive cases were detected while in the Nuwara Eliya district 543 blood smears were collected with 4 positives in the year 2008
(Table 7.21)

Table 7.21 Number of blood films, malaria cases and Annual Parasite Incidence (API) by District

District	Year	No. of blood smears	No. of positives	*P. vivax*	*P. falciparum*	Mix	API
Kandy	2007	26,387	4	4	0	0	0.008
	2008	28503	17	16	0	01	0.012
Matale	2007	11,674	0	0	0	0	0
	2008	16973	26	26	0	0	0.06
Nuwara Eliya	2007	183	0	0	0	0	0
	2008	543	4	4	0	0	0.006

Entomological surveillance:

An. culicifacies, the principal vector of malaria and, *An. subpictus*, a secondary vector of malaria in Sri Lanka were encountered in the year 2008 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 0.06 per hut. *An. subpictus* was also encountered in substantial density with 0.42 *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 in pyrethrum spray sheet collections, cattle baited trap and hut collection in very low density. 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 7.22

Table 7.22 Entomological surveillance by District

District	Methods	Indicator	2007		2008	
			An. culicifacies	*An. subpictus*	*An. culicifacies*	*An. subpictus*
Matale	INRC	No/Room	00	0.02	00	0.004
	PSC	No./Room	0.003	0.185	0.002	0.06
	CBT	No/Trap	0.016	1.375	00	0.2
	CBH	No./Hut	1.641	7.569	0.06	0.42
	WTC	No./Trap	00	0.009	00	00
	LS	No./Dip	0.008	0.015	0.005	0.003
	HBNC (in) (out)	No/bait/hour			0.0009 0.006	0.004 0.008
Kandy	INRC	No/Room	00	00	00	00
	HBNC (in) (out)	No/bait/hour	06	00	 00 0.21	 00 00
	PSC	No./Room	00	00	00	00
	CBT	No/Trap	0.35	00	00	00
	CBH	No./Hut	0.36	0.29	1.53	00
	WTC	No./Trap	00	00	00	00
	LS	No./Dip	0.15	00	0.002	00
Nuwara Eliya	INRC	No/Room	00	00	00	00
	HBNC (in) (out)	No/bait/hour	05	00	 0.07 2.44	 00 00
	PSC	No./Room	00	00	00	0.02
	CBT	No/Trap	0.35	00	0.21	0.4
	CBH	No./Hut	00	00	1.25	0.05
	WTC	No./Trap	00	00	00	00
	LS	No./Dip	0.09	00	0.07	00
	ODC	No/Man hour	0.25	00	0.26	00

Indoor Residual insecticide spraying

In the Kandy district 148 houses have been sprayed with Fenitrothion. In the Nuwara Eliya district only one army camp was sprayed. In the Matale district 8300 houses were sprayed. The insecticides used in Kandy and Nuwara Eliya districts were Deltamethrin and Fenitrothion while Matale district used Vectron (Table 4)

Table 7.23 Residual insecticide spraying by District

District	Year	Villages	houses	Population	Houses			Population	Insecticide used
					Fully	partially	Closed/ refused	Protected (%)	Fenitrothion Packets
Matale	2007		6904	19082	6396	131	377	19082	5648
	2008	49	8300	29696	7650	198	452	93	Vectron 7965 Keothrin 1551
Kandy	2007	06	923	3697	900	15	08	3582	Deltamethrin 71
	2008	5	148	1006	128	2	18	95	Fenitrothion 120 Deltamethrin 225
N Eliya	2007	03	508	2357	508			2357	Deltamethrin 71
	2008	1 (camp)	1	541	1	0	0	100	Deltamethrin 20

Impregnation of bed nets with permethrin

In the Matale district 1553 bed nets were impregnated with permethrin and 36,860 LLIN were distributed in the year 2008. In the Kandy district 190 nets were impregnated in the same year (Table 7.24)

Table 7.24 Impregnation of bed nets with permethrin by District

	Year	No. of families	Bed nets	Insecticide used Liters (Permethrin)
Matale	2007	900	4075	80.0
	2008	171	1553	22.9
Kandy	2007	295	295	03
	2008	1 (Hospitals)	190	2
Nuwara Eliya	2007	00	00	00
	2008	0	0	0

Application of Insect Growth hormone, pyriproxyfen to the gem pits in L/Pallegama

Growth regulator, Pyreproxifen has been used in 1457 gem pits in 4 villages in L/Pallegama in the year 2007. No growth regulater was used in 2008 (Table 7.25)

Table 7.25 Application of Insect Growth hormone, pyriproxyfen to the gem pits in L/Pallegama

Year	No. of gem pits	Pyriproxyfen used Kg	Population protected
2007	1457	8.5	1205

2008	00	00	00

No application of Insect Growth Hormone, pyriproxyfen in the Kandy and Nuwara Eliya districts in the years 2007 and 2008.

Application of larvivorous fish

Larvivorous fish, *Poecilia reticulata* was applied in agricultural wells, rock pools, brick fields, small streams and water storage tanks in the Matale district in the year 2007 (Table 7.26)

Table 7.26 Application of larvivorous fish, P. reticulata by district

District	Year	No. of permanent breeding places	No. of fish introduced
Matale	2007	700	15,000
	2008	801	9248
Kandy	2007	340	1400
	2008	20	300
Nuwara Eliya	2007	300	1000
	2008	00	00

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

Health education and community awareness programmes

The health education and community awareness programmes conducted in the years 2007 and 2008 are shown in Table 7.27

Table 7.27 Health education and community awareness programmes by District.

District	Year	Target group	No. of programmes	No. of participants
Matale	2007	Community	35	1225
	2008	Community	28	678
		Health staff	19	261
		Mothers	16	286
		Students	36	1009
Kandy	2007	Schools	03	1200
		Community	05	1500
	2008	Hospitals	8	349
		Community	13	1102
Nuwara Eliya	2007	Community	03	250
	2008	Hospital staff	2	76
		Community	1	80

Anti Malaria Campaign Regional Office Kandy has no photocopying, computer facilities, e-mail or internet facilities. These facilities are very important for proper functioning The Anti Malaria Programme carries out dengue vector surveillance, in addition to the malaria control.

Since the malaria control programme has embarked 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 Galewela, 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 and strengthening data system analysis should be considered as a priority for 2009.

Chapter-8

8. SPECIAL UNITS

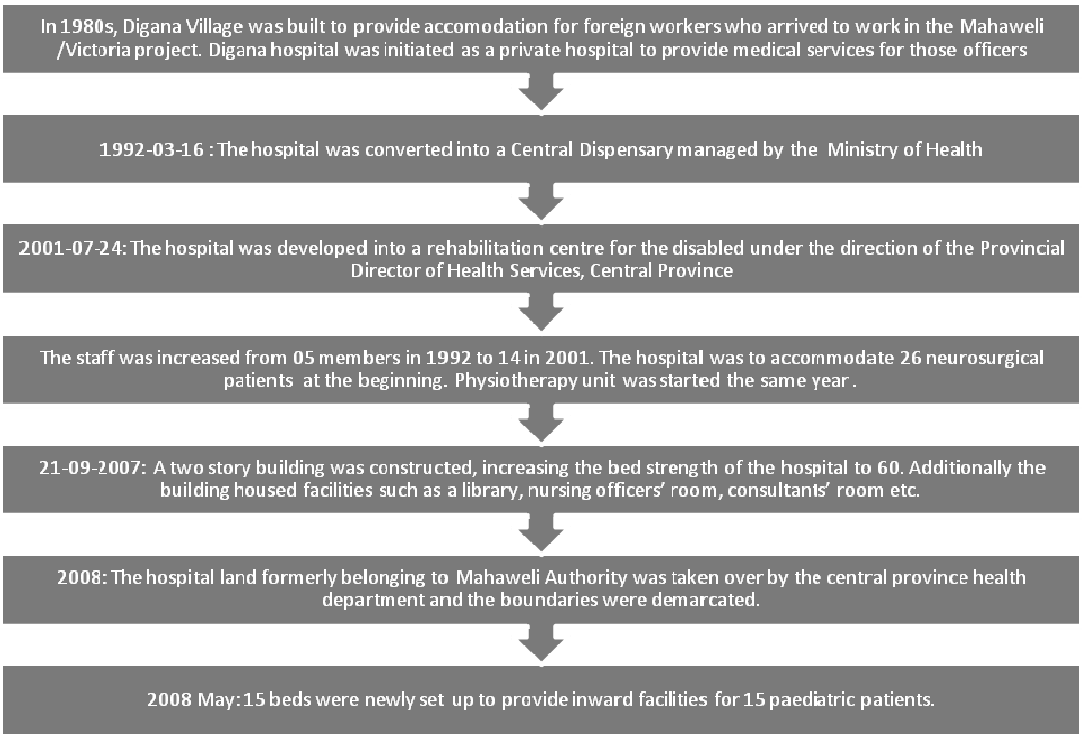
8.1 Patient Rehabilitation Services

Physical Rehabilitation Center: Digana.

The rehabilitation of physically disabled patients is an aspect that fails to draw adequate attention in the general health services due to the lack of facilities and trained staff. The long term adverse impact of not addressing this problem was highlighted when statistics showed a significant number of patients needing medium and long term rehabilitation being discharged from tertiary care units without a proper rehabilitation plan resulting in bed ridden or wheel chair bound citizens.

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).

Progress over the years



The available services are

1. **Inward facilities:**

   (There are 30 beds for male patients, 20 beds for female patients and 15 beds allocated for paediatric patients. All residential facilities are provided for these patients.)

2. **Medical Management:**

A main challenge faced when dealing with these patients is being sensitive to the sudden transformation they have undergone from being healthy, independent individuals to those who are physically, mentally and personally disadvantaged. Thus, the management of these patients by the hospital staff extends well beyond the boundaries of straightforward medical treatment.

Rheumatology Services

These services are provided for:

1. Inward patients
2. Out patients.
3. Follow up services

Community Paediatric Services:

This pilot project involves the early identification of disabled children and education of field officers by the community paediatrician in order to enable early referral of these patients to the rehabilitation centre.
In addition to inward treatment, clinic services and follow up services are also provided through this department.

Special Ward Rounds

A special ward round is held every friday with the participation of a Consultant Rheumatologist, Paediatrician, the Medical Officer In Charge, Medical Officer of Mental Health, physiotherapist, occupational therapist, planning officer, social service officer and nursing officers. During the ward round, ideas and suggestions from each specialty are shared in order to individualize and optimize patient care services.

3. **Physiotherapy:**

The objective of physiotherapy is to facilitate the movements of disabled muscles and joints through the use of heat, electricity, gravity, sound, kinetic energy etc. The treatment given with the use of the hands of the physiotherapists also plays a major role in their prognosis. By discharge, the patient is made to overcome many of the limitations caused by the initial disability and allowed to explore the capacity to conduct daily activities of living as much as possible with autonomy. E.g. training given to balance oneself when sitting, walking with or without crutches

Physiotherapy services are available for outpatients as well as for inpatients in the institution.

4. **Occupational Therapy:**

Involves specific activities utilized as a mode of treatment with regard to mentally and physically disabled patients. Following are a list of such activities:

- provision of special attention and care to stroke patients to improve their mental status
- identification and training of specific movements needed by an individual to carry out daily activities of living
- patients with paralyzed upper limbs are trained to explore the ability to reuse them with the help of adaptive devices and splinters
- assessing the suitability to use a wheel chair and the provision of training once chosen to use one
- guiding to improve the movements of the joints, the strengthening of muscles, coordination, balancing when sitting and when changing positions
- designing adaptive devices and providing training to use them
- assessing the ability to engage in the original job or a new job in order to make the person financially independent

5. Vocational Training :

Most of the patients are unable to engage in the original occupation following the disability. The idea behind vocational training is to enable these patients to lead a productive and independent life in the society while contributing for the development of the country. The patients are given the facility to identify, train and engage in occupations that suite their general condition and liking. e.g. making candles, cards, mats, envelopes, brooms and fabric painting etc.

The necessary physical and technical resources for this are provided by the Central Province Social Services Department and the Kandy Women's Development Centre.

6. Supply of disable appliances free of charge:

7. Counseling services by professional counselors:

The importance of addressing the psychological aspect of a patient who is physically disabled cannot be overemphasized. The patients are provided with the appropriate mental health services and counseling which empower them with the inner strength to face the challenge of living with the handicap. The family of the patient is also counseled to help create an atmosphere where the individual is capable of living an active and dignified life.

8. Speech therapy

With the inception of the programme to rehabilitate disabled paediatric patients since 2008, a large number of patients with speech difficulties and cognitive difficulties have been identified. Provision of speech therapy for such patients has been made possible through the voluntary service provided by the therapist of Kandy Women's Development Centre. Currently the programme has expanded to cover adult patients as well as outpatients.

9. Training of relatives in the care of the disabled:

10. Community Resettlement

Community resettlement is a crucial factor in the rehabilitation of the disabled and is yet to be addressed even at National level. However it is already underway at Digana Rehabilitation Hospital with 200 resettlement activities been carried out by the end of 2008.

The main objective of this programme is creating a suitable environment for the patient who gets discharged from the ward. E.g. adjusting the doors to enable travelling via wheel chair by self, replacing staircases with ramps, providing easy access to toilets, installing bars to aid walking on patient's own

Resettlement programme also involves identifying a suitable self employment for the patient and conducting discussions with grama niladhari, samurdhi officer, social service officer and Medical Officer of Health to establish the patient in his home environment.

The resettlement protocol:

1 In-ward Social Assessment of the patient by Social Services Officer
2 Home visit by the Occupational therapist, physiotherapist, Medical officer and the Social Service 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.

11. Follow Up Services

This involves reviewing the patient's health and life style issues once the patient has been resettled.
The following are done at follow up visits:

1. Advising patients on suitable exercises to speed up the recovery process
2. Rehospitalisation depending on the need
3. Reviewing suitability of the adjustments made in the patient's home environment
   e.g. ramps
4. Reviewing the mode of self employment introduced to the patient and providing further assistance where necessary
5. Conducting a follow up clinic at the hospital

While catering to the specific needs of rehabilitation, the hospital still maintains its Out Patient Department & clinic services (including dental clinic services) for the general population of Digana.

Additionally, the patients are transferred to Kandy and Peradeniya General Hospitals for clinic services and investigation procedures of specialized nature.

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

No	Activity and Description	2006	2007	2008
01	Total No. of Admission	155	213	355
02	Discharge With total recovery	87	85	227
03	Total No. of Deaths	00	02	03
04	Total No. of Vocational Training given	48	50	58
05	Total No. appliances given free of charge	35	12	16
	• Wheelchairs	19	06	10
	• Crutches		00	01
	• Walking aides		02	03
	• Others – commode chairs			
06	No. of Patients Counseled	23	20	11
07	No. of Home Visits	42	24	08
08	No. of successfully resettled Patients	28	63	72
09	General OPD average Per month	3300	3630	4080
10	Medical clinic average per month	390	4380	3300
11	Medical clinic average per month	3605	4380	6570
12	Maternity clinic average per month	1980	1230	2370

The following were undertaken in 2008 to develop the rehabilitation centre:

1. Developing the emergency treatment unit with the aid of well-wishers and minor staff
   This included the acquisition of 02 ICU beds, a nebulizer and the painting of the emergency treatment unit.
2. Renovation of the old building in order to establish a physiotherapy unit and an occupational therapy unit for children.
3. Installing a new main gate for the front entrance of the centre
4. Displaying the vision of the hospital
5. Building a new room for the OPD
6. Renovation of the OPD toilets
7. Establishing a dairy shop with the contributions made by the Department of Animal Production and Health, Central Province and the welfare society of the staff.
8. Building a resting room for the minor staff and the drivers of the centre
9. Painting of the original hospital building
10. The rear entrance of the hospital was developed with a parapet wall and a gate
11. The hospital library was developed through the acquisition of more books from well-wishers
12. Repairing the ambulance garage

Digana Rehabilitation Centre – providing specialized care for the disabled

8.2 Regional Health Training Centre (RHTC) - Kadugannawa.

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 – 2008

Basic Training Courses / Programmes		
Name of Course / Program	No. of Batches	No. of Students
Community nursing field programs	02	288
Medical Students	06	180
Dental Students	04	40
Basic Training Courses / Programmes		
Name of Course / Program / Workshop	Target Group	No. of Participants
First aid program	Health Staff	28
in –service Training program	Minor Staff	71
Data base management training Programme (2 Programmes)	PPO/SO	34
Court Procedure	PHII	35
In –service Training program	Newly Recruited Medical Officers	13
In –service Training program	Dispenser	19
Management Training program	Nursing officers	58
In –service Training program	Medical officers	141
In –service Training program	Management Assistance	43
CEPELS program	Medical officers	140
Occupational Health	Health Staff	28
Other Training Program		
Dengue Control programmes	Volunteers	186
Volunteer Training programme	Volunteers	138
STD/Aids program	Youth Team	28
Brest Feeding programme	Mothers	49
Food Handling Establishment	Traders	30
World children day program	preschool children/Their parents/Teachers	311

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). However, as there are 224 hospitals under the Central Provincial Health Department it was impossible for the BES to take care of repairs and maintenance of all the equipment in these hospitals resulting in a large number of serviceable medical equipment getting stocked in hospitals that were rendered unusable 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 BME unit have gradually improved with the limited staff available. The team of dedicated workers has been working silently and has been instrumental in saving millions of rupees for the healthcare system in the Central Province.

The BME Unit has made progress in leaps and bounds in 2008 and a very positive feedback from the heads of institutions on the timely back up support provided by the team.

The equipment repaired by type in 2008 is given in the table below.

Table 8.3 List of medical equipments repaired during year 2007 and 2008

Type of Equipment	Name of Equipment	Quantity	
		2007	2008
General	BP Apparatuses	246	201
	Suckers	88	51
	Nebulizers	53	40
	Autoclaves	49	32
	Boilers	-	11
	Sterilizers	43	31
	Glucometers	02	2
	Spot Lamps	14	8
	Refrigerators	-	25
	Oxygen Regulators	03	04
	Microscopes	06	16
	Spectrophotometers	09	-
	Centrifuge machines	08	07
High Tech Equipment	Defibrillators	-	02
	High Pressure Sterilizers	17	02
	ECG machines	28	40
	Syringe pumps	-	03
	Infusion pumps	02	03
	Pulse Oxymeters	25	12
	X-ray machines	19	18
	Scanning machines	02	04
Theatre Equipment	Mobile Theatre Lamps	-	05
	Theatre Lamps	10	
	Theatre Tables	-	
	Anesthetic machines	06	02
	Theatre Beds	11	
Dental Equipment	Dental Chairs	101	160
Pediatric Equipment	Phototherapy units	13	
	Infant Warmers	04	
	Scales	10	27
Obstetric Equipment	Doppler machines		05
	CTG machines	03	02
Ophthalmology Equipment	Slit Lamps	05	07
	Ophthalmoscope	07	02
ENT Equipment	Diagnostic Sets	07	
	Laryngoscopes	04	02

In addition to the above mentioned medical equipment, the repairs of many nonmedical items have been undertaken by the unit. E.g. generators, water pumps, air-conditioning units, type writers etc.

By the end of 2008 the BME unit 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 excess equipment. Special mention should me mentioned of Rikillagaskada and Dickoya with this regard.

The unit also addresses the following with regard to purchase of new equipment for the health institutes within the province:

- Identifying the necessary equipment and their quantity
- Providing specifications for the required equipment
- Provision of technical assessments
- Provision of recommendations by comparing the goods with the pertinent specifications
- Distribution of the new equipment according to the hospital requirement and guiding the staff to handle them efficiently
- Carrying out maintenance of 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 is being maintained up to 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 has been successfully repaired by the team at the Bio-Medical Engineering unit.

Another service provided by the BME unit is establishing lab services and Emergency Treatment Unit services in the hospitals. Under this programme equipment which has maximum benefit to establish these units are identified and procured through redistribution and other methods. Through this programme, Rikillagaskada hospital, Dickoya hospital and many primary care institutes in the Nuwara Eliya district have benefited at numerous levels.
The BME unit continues to hold a regular awareness program at no additional cost for hospital staff on the usage and maintenance of medical equipment. This has changed the attitude of the staff using this equipment. In 2008, ten such programs were conducted mainly in DBH Rikillagaskada, Dickoya, MOH Menikihinne, Wattegama, Kadugannawa, Naula and some large Divisional Hospitals around Kandy District. Moreover, institutional heads of Nuwara Eliya district were made aware as to how to minimize wastage of surgical equipment under this programme.

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, Sello tape etc for the above purpose.

The cost saving to the Department of Health for some of the equipment repaired in 2008 is approximated to be Rs.4,391,550.00. 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.

The construction of the new BME unit with different areas to handle electronic equipment, high pressure apparatus, generators, dental equipment etc is paving way for more organized and efficient rendering of services. As a result, the unit has

expanded its services to handle repairs of generators and air conditioning units of the whole of central province and has attended to repairs of many domestic power supplies. Special mention should be made of the renovation of Rikillagaskada domestic power supply and its water pump system, renovation of domestic power supply of Digana Rehabilitation Centre and Udunuwara MOH office.

The following needs to be addressed as a priority to ensure the smooth functioning of the BME unit in 2009.

1. The establishment of the new BME unit with separate rooms with basic facilities and work benches to handle :
    - large equipment such as x-ray machines, dental units and refrigerators
    - smaller equipment such as nebulizers
    - electronic equipment such as cardiac monitors, ECG machines

2. Establishing
    - separate stores to keep received items, repaired items, spare parts etc
    - A conference hall with facilities to train the staff members regularly
    - An office room and staff welfare room

3. Provision of formal advanced training for all staff members of the BME unit

4. Establishing training programmes for health care institute staff members on efficient handling of equipment with minimal damage

5. Streamlining the procedures of purchasing spare parts in emergencies and on the regular basis to maximize the benefit that the team could play in the prompt repair of medical equipment.

6. Procurement of instruments to assess the standards of repaired items e.g. BP calibrators, Oscilloscopes

7. Introducing a uniform for the BME unit staff members to establish their identity at the workplace

8.4 Dental Services

8.4.1 Preventive and Curative Dental Services

The major oral diseases identified in Central Province are dental caries, periodontal disease, malocclusions and oral cancers respectively. The prevalence of dental caries is very high among the school population of which the preschool and children in year one are the most affected population of this disease. Periodontal diseases or gum diseases are common among adult and older population. Early loss of deciduous teeth (milk teeth) due to caries or extraction due to caries has led the way to develop malocclusion among young population because of the growth retardation of jaws, loss of required space for permanent successor, have been identified as a result of early loss of deciduous teeth.

In the National Oral Health survey conducted in 2003, the key findings given below identifies clearly the need to promote oral health in Sri Lanka.

Caries in adults aged between 35 - 40 yrs - 90%
Periodontal Disease in adults aged 35- 40yrs - 91%
Caries in Children aged 18 - 54 months - 60-70%
Caries in children 60 months - 65.5%
Average number of decayed teeth in children- 03
The percentage of children with caries from 12 months to 24 months increase from 23% to 65%

Oral cancer Prevalence is high among estate workers and farmers in Central Province due to the habits of betel quid chewing, "bedi" & cigar smoking as well as alcohol consumption. The dental clinics in the peripheral hospitals have been provided with modern facilities to perform more advance treatments like root canal treatment. This has ensured that modern dental treatment is made more accessible to the rural population. However, patients who need consultative advice are referred to General (Teaching) hospitals or Dental Hospital Peradeniya for major surgeries such as ortognathic surgery, excision of oral tumours, cleft palate and lip surgeries, which are performed by maxillofacial surgeons and correction of severe malocclusions, growth modifications are performed by orthodontists.

In the Central Province, 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. Mobile dental and special outreach clinics are provided to areas where routine dental care services are not available.

There are 70 Dental clinics and 49 school dental clinics in the Central Province to deliver oral health services to the general public. The distribution of dental services in the three Districts is given in table 8.5

Table-8.4 Dental Services in Central Province

	Kandy		Matale		Nuwara Eliya	
	2007	2008	2007	2008	2007	2008
Hospital Dental Clinics	29	36	09	12	22	22
Community Dental Clinics	03	03	Nil	Nil	Nil	Nil
Adolescent Dental Clinics	02	02	03	03	01	01
School Dental Clinics	31	31	12	12	06	06
School dental clinics functioning	25	25	10	10	05	05
Mobile Dental Clinics	01	01	01	01	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.

One Regional Dental Surgeon is appointed in each District and he participates in the planning and monitoring of dental services in his 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 has a preventive health steering committee meeting, which is held once in 3 months with the participation of all Regional Directors, Consultants (Community Physicians, Chest Physicians etc), All District level technical staff which includes the Regional Dental Surgeon and all Heads of special institutions. This forum has made it possible to table issues and monitor the progress of the Dental Care services in the Province.

Table 8.5 Performance of Dental Surgeons

	Kandy	Matale	Nuwara Eliya	Total
EMERGENCY				
No. of extractions-deciduous	4221	3223	1824	9268
Permanent: caries	44771	20745	18352	83868
periodontal	11953		6782	18735
Other	2317	6954	3306	12577
D.A.A Treated	5634	3608	2660	11902
Fractures treated	306	37		343
Medico Legal	49	12		61
Post operative :Haeamorrhage	90	02	65	157
Infection	375	167	275	817
ORAL MEDICINE				
Premalignant : Leukeplakia	47			
Other	170	01		171
Oral carcinoma	26	01		27
Candida Albicans	67	23		90
Restorations Temporary	15992	8043	4697	28732
Permanent : Amalgam	9036	6496	3620	19152
Composite	7937	2592	880	11409
Advanced Construction	1505	654	512	2671
Periodontal Treatment :Scaling	5307	2210	3512	11029
Surgery	265	07		272
SURGERY				
Incision & Drainage	1192	387	988	2567
Pacted	453	192	122	767
Fractures	09			09
Biopsies	56			56
Other	681	55		736
Indoor	578	221		799
All Referrals	2612	773	2820	6205
Miscellaneous	15670	6446	4212	26328
Prevention : Individual	15821	4197	6288	26306
Community	2163	307	1285	3755
First visit	92545	50638	35472	178,655
Second visit	24649	4930	5566	35190
Total attendance	118191	55568	41038	213,845

Table 8.6 Performance of School Dental Therapists

	Kandy	Matale	Nuwara Eliya	Total
Permanent filling ; Deciduous	35689	13880	5330	
Permanent	9966	13880	3018	
Dressing Deciduous	23296	6019	3988	
Permanent	3463	6019	2024	
Extractions	9508	1962	447	11917
Complete Scaling	20848	9220	4820	34888
Initial (Class 1) Examination	17726			
Completion	13121			
Revision (Class 4) Examination	16168			
Completion	12233			
Revision (Class 7) Examination	16041			
Completion	13574			
Miscellaneous	12482	6054		
Referrals	4658	928	740	18986
Casual	22741		4982	
Total attendances	100808	25775	18678	145,261
Health education 10.1 No of Children's	66303	17709	16288	100,300
No of Adults	18697	5316	4327	28340
No of Teachers	3433	1602	685	5720
No of Sessions	2145	784	825	3754
No of outreach Days	1964	426	1912	4302

To improve the oral health of innocent rural children, maximum number of outreach programs are planned annually to cover up the whole school population. Special outreach programmes were held in Udadumbara, Hatharaliyadda and Galaha. The udadumabara out reach clinic covered 18 schools in 17 days with 73 dental therapist work days. In Hatharaliyadda 12 schools were covered in 14 days 64 dental therapist working days while in Galaha 7 schools were covered in 22 days using 21 dental therapist working days.

Dental exhibitions were held in the MOH Thalathuoya, Doragamuwa maha vidyalaya and Gampola urban council areas.

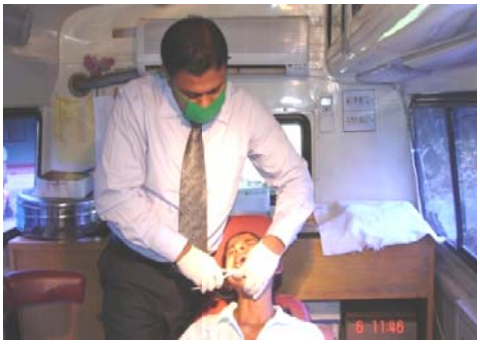
8.4.2 Mobile Dental Services

The Mobile Dental services 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 first mobile dental unit attached to the PDHS office to ensure dental services are brought closer to these populations who have no access to regular dental care. Since then two more mobile dental units have been provided to the Matale and Nuwara Eliya Districts.

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.



Chapter-9

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

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 population 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.

Table 9.1 PHM availability in estate sector by PHDT region

Region	Number available	Number vacant	Qualified	Trained	Untrained
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 more manageable areas while discussions have been held with the MoH and other relevant departments on the creation of posts, recruitment of the additional staff required filling all vacancies of the PHC teams working in the estate areas.

Table 9.2 The MOH areas after redemarcation in the Nuwaraeliya District.

MOH areas in N'Eliya before redemarcation	Population	MOH areas in N"Eliya after redemarcation		Population
Nuwaraeliya	132,054	Rikillagaskada	Maturata	33,237
Kothmale	107,599		Haguranketha	64,042
Maskeliya	138,826	Talawakale	Kotagala	85,300
Walapane	55,801		Lindula	85,845
Ambagamuwa	92,200	Nuwaraeliya	Nuwaraeliya	64,172
Talawakale	171,145		Ragala	67,822
Rikillagaskada	97,279	Kothmale	Kothmale	70,407
			Nawathispane	37,192
		Maskeliya	Maskeliya	79,479
			Bagawantalawa	59,347
		Walapane	Walapane	55,801
		Ambagamuwa	Ambagamuwa	92,200

9.3 Strengthening of Estate Curative care services

9.3.1 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.

9.3.2 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.

The 10 estate hospitals which were functioned under the estate administration earlier, taken over by the government are indicated below.
Nuwaraeliya district –

1. Dayagama Estate hospital – Functioning as a divisional hospital at the moment
2. Mooloya Estate hospital – Functioning as a divisional hospital at the moment\
3. Highforest Estate hospital – Functioning as a divisional hospital at the moment
4. Gonapitiya Estate hospital - – Functioning as a divisional hospital at the moment
5. North Medakumbura Estate hospital – Functioning as a divisional hospital at the moment
6. Frotoft Estate hospital – New building constructed. Services not started yet
7. Ragala Estate hospital – Functioning as a central dispensary at the moment
8. Alma Estate hospital – Not started yet

Matale district –

1. Bandarapola Estate hospital – Functioning as a central dispensary at the moment

Kandy district –

1. Westhall Estate hospital – Renovations done in 2008. Services started in 2009.

With the proposal of improving services of estate hospitals, line ministry has funded more than Rs 22 million to improve the existing infrastructure facilities in 6 estate hospitals (North Medakumbura, Dayagama, Mooloya, Highforest, Gonapitiya and Westhall) during 2008. Before 2008, then Ministry of development of estate infrastructure has funded Rs 20.5 million to develop infrastructure in these hospitals. This project involved the new construction of a hospital in Frotoft estate also. With the help of line ministry and Provincial council most of the infrastructure and equipment requirements are fulfilled in these hospitals. Further, adequate number of staff was also allocated to these hospitals to serve the estate community. However, still there is a need to improve more infra structure facilities such as quarters for the health staff as these hospitals are situated in difficult areas to travel. Further, other supporting facilities such as emergency treatment units, basic investigative facilities need to be improved.

Services provided by the functioning estate hospitals in 2008 are indicated below

Table 9.3 Services provided by estate hospitals (taken over by the government)

Hospital	No of wards	No of beds	OPD attendance	Admissions	Bed occupancy rate	Clinic attendance	Total no of deliveries	No of patients transferred out
DH Dayagama	03	26	20153	2654	33.77	2650	156	425
DH North Medakumbura	03	18	4674	803	32.00	2327	11	170
DH Mooloya	04	24	13999	1763	71.8	2881	14	189
DH Highforest	03	32	32430	1508	62.9	12856	81	279
DH Gonapitiya	03	28	12053	757	28	1528	36	191
PMCU Ragala			20800					
PMCU Bandarapola			14607					

Table 9.4 Trends of services provided in estate hospitals (taken over by the government) 2006 – 2008

Hospital	Year	OPD attendance	Admissions	Bed occupancy rate	Clinic attendance	Total no of deliveries
DH Dayagama	2006	15,070	2,202	83.21	4,487	126
	2007	16,426	3,287	72.92	4,590	181
	2008	20,153	2,654	33.77	2,650	156
DH North Medakumbura	2006	6,551	617	9.35	1,495	6
	2007	8,357	1,477	27.04	2,282	11
	2008	4,674	803	32.00	2,327	11
DH Mooloya	2006	13,572	878	46.36	1,657	27
	2007	14,855	1,557	45.29	2,650	40
	2008	13,999	1,763	71.8	2,881	14
DH Highforest	2006	25,680	1,571	42.91	5,723	64
	2007	26,087	1,416	43.80	6,080	65
	2008	32,430	757	62.9	12,856	81
DH Gonapitiya	2006	7,985	797	10.71	1,163	34
	2007	10,585	664	13.32	1,448	42
	2008	12,053	757	28.0	1,528	36
PMCU Ragala	2006	20,249				
	2007	18,755				
	2008	20,800				
PMCU Bandarapola	2006					
	2007	12,012				
	2008	14,607				

Apart from these some other hospitals in Central Province such as DGH Nuwaraeliya, DGH Nawalapitiya, DBH Dickoya, DBH Rikillagaskada, Divisional Hospitals such as Agarapathana, Kotagala, Maskeliya, Lindula, Udupussellawa, Walapane, Bagawanthalawa, Lakshapana, Pussellawa, Dolosbage, Rattota and large number of PMCUs in estate areas serving mainly for the estate population in Central Province.

Fig 9.1 OPD Attendance by estate hospital 2006 – 2008

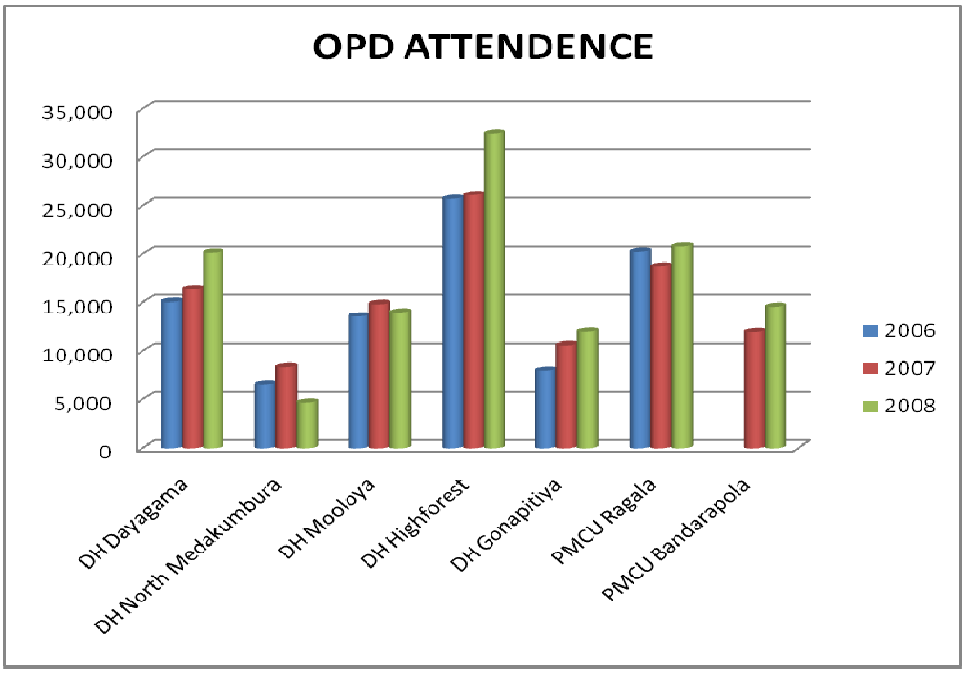
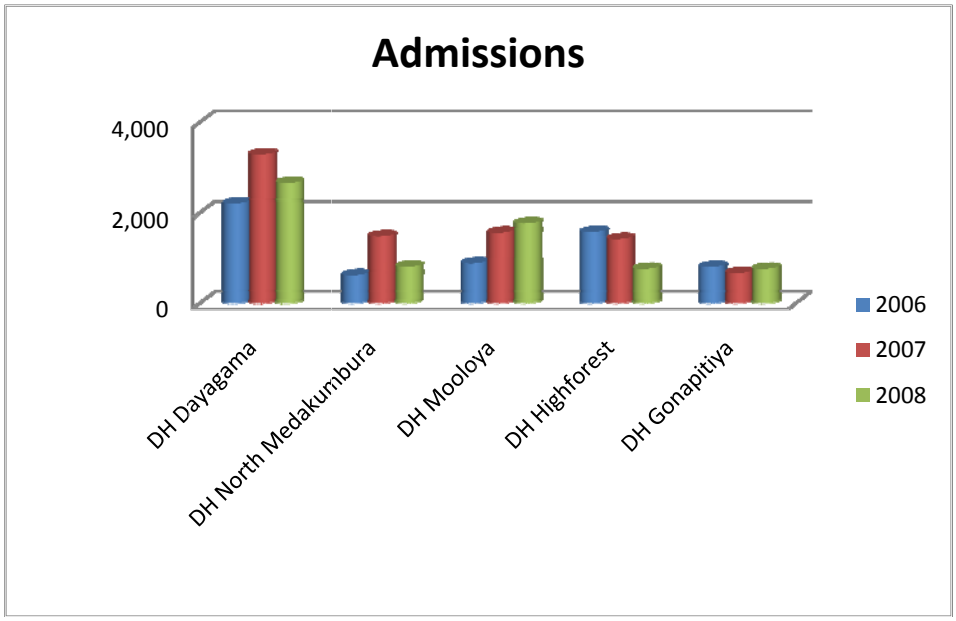


Fig 9.2 Admissions by estate hospital 2006 – 2008



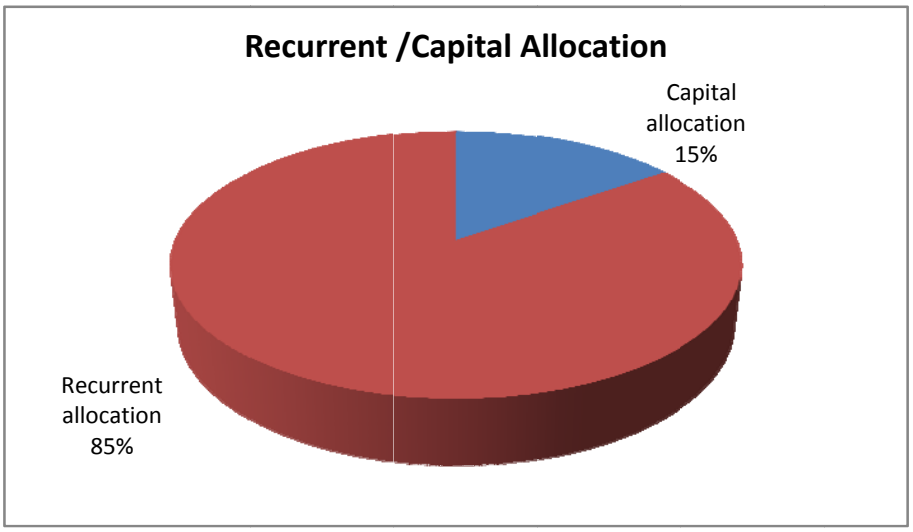
Chapter-10

10. FINANCIAL MANAGEMENT SYSTEM

Financial Management system mainly comprised of two categories. Recurrent management system mainly involves in maintaining the existing health system and capital financial management involves in activities related to development of the health system. Total allocation (both capital and recurrent) for the province is indicated below.

1. Recurrent allocation – 2,891,000,000.00 Rs
2. Capital allocation – 523,485,000.00 Rs

Fig 10.1 Total allocation (both capital and recurrent) for the province in 2008



10.1 Recurrent Expenditure Summary

Table 10.1 General administration

Object	Title	Total Estimate	Total Expenditure	Balance Rs
561-1-1-1001	Salaries and Wages	72,772,000.00	72,771,512.76	487.24
1002	Overtime Holiday pay	18,499,000.00	13,272,436.58	5,226,563.42
1003	Other Allowances	3,370,500.00	3,319,597.96	50,902,.04
1004	Interim Allowances	0.00	0.00	0.00
1005	Vacation leave Allowances	1,000.00	0.00	1,000.00
1006	Property loan Intrest	1,500,000.00	1,106,232.05	393,767.95
1007	Cost of living Allowances	13,197,500.00	12,999,119.19	198,380,.81
1101	Traveling Expenditure	7,381,000.00	7,270,189.54	110,810.46
1201	Stationary & Office Equipment	3,225,500.00	3,176,881.20	48,618.80
1202	Fuel and Lubricant	11,782,500.00	11,605,412.89	177,087.11
1203	Uniform	85,000.00	42,878.70	42,121,.30
1204	Diet	0.00	0.00	0.00
1205	Medical Supplies	0.00	0.00	0.00
1206	Mechanical & Electrical Equipment	381,000.00	375,278.00	5,722.00
1207	Other Supplies	951,650.00	700,501.50	251,148.50
1301	Vehicle	7,315,000.00	7,204,952.48	110,047.52
1302	Plant Machinery & Equipment	944,000.00	918,833.15	25,166.85
1303	Building & Structure	1,109,000.00	850,134.10	258,865.90
1304	Other Supplies	289,000.00	265,582.75	23,417.25
1401	Transport	200,000.00	178,336.00	21,664.00
1402	Telecommunication	2,376,000.00	2,301,268.07	74,731.93
1403	Postal Charges	804,600.00	792,435.50	12,164.50
1404	Electricity & water	1,607,750.00	1,583,509.53	24,240.47
1405	Rental & Hire Charge	600,000.00	570,000.00	30,000.00
1406	Rates & Taxes	272,000.00	217,499.95	54,500.05
1407	Other Contractual Services	1,902,000.00	1,873,358.75	28,641.25
1903	Holiday warrants	195,000.00	69,806.50	125,193.50
1905	Others	1,632,000.00	1,595,852.90	36,147.10
	Total	152,393,000.00	145,061,610.05	7,331,389.95

10.2 Patient Care Services

Table 10.2 Patient Care Services

Object	Title	Total Estimate	Total Expenditure	Balance Rs
561-1-1-1001	Salaries and Wages	1,032,289,500.00	1,029,866,268.34	2,423,231.66
1002	Overtime Holiday pay	474,387,329.00	440,697,109.09	33,690,219.91
1003	Other Allowances	182,960,000.00	129,685,849.05	53,274,150.95
1004	Interim Allowances	0.00	0.00	0.00
1005	Vacation leave Allowances	1,000.00	0.00	1,000.00
1006	Property loan Intrest	17,309,000.00	16,953,166.16	355,833.84
1007	Cost of living Allowances	164,678,023.00	158,406,568.14	6,271,454.86
1101	Traveling Expenditure	17,045,000.00	16,788,667.76	256,332.24
1201	Stationary & Office Equipment	3,831,000.00	3,773,304.95	57,695,05
1202	Fuel and Lubricant	32,251,315.00	31,767,301.97	484,013.03
1203	Uniform	2,876,500.00	2,780,970.00	95,530.00
1204	Diet	66,430,000.00	65,433,487.49	996,512.51
1205	Medical Supplies	4,999,000.00	3,648,273.05	1,350,726.95
1206	Mechanical & Electrical Equipment	1,831,000.00	1,803,180.70	27,819.30
1207	Other Supplies	13,019,000.00	12,823,422.10	195,577.90
1301	Vehicle	19,860,000.00	19,500,859.86	359,140.14
1302	Plant Machinery & Equipment	4,136,000.00	3,929,221.64	206,778.36
1303	Building & Structure	7,450,000.00	7,294,570.38	155,429.62
1304	Other Supplies	1,273,500.00	1,253,949.90	19,550.10
1401	Transport	153,000.00	47,486.50	105,513.50
1402	Telecommunication	12,909,500.00	6,257,350.36	6,652,149.64
1403	Postal Charges	491,000.00	345,685.00	145,315.00
1404	Electricity & water	58,866,985.00	52,411,552.61	6,455,432.39
1405	Rental & Hire Charge	983,000.00	860,401.91	122,598.09
1406	Rates & Taxes	1,505,000.00	998,393.68	506,606.32
1407	Other Contractual Ser vices	20,858,000.00	17,759,411.90	3,098,588.10
1903	Holiday warrants	560,000.00	524,365.50	35,634.50
1905	Others	567,000.00	430,249.74	136,750.26
	Total	2,143,520,652.00	2,026,041,067.78	117,479,584.22

10.3 Preventive Care Services

Table 10.3 Preventive Care Services

Object	Title	Total Estimate	Total Expenditure	Balance Rs
561-1-1-1001	*Salaries and Wages*	384,155,000.00	384,154,509.78	490.22
1002	*Overtime Holiday pay*	28,654,900.00	19,585,275.97	9,069,624.03
1003	*Other Allowances*	24,488,100.00	24,120,712.84	367,387.16
1004	*Interim Allowances*	0.00	0.00	0.00
1005	*Vacation leave Allowances*	1,000.00	0.00	1,000.00
1006	*Property loan Intrest*	6,062,000.00	5,620,874.23	441,125.77
1007	*Cost of living Allowances*	61,482,148.00	60,538,572.08	943,575.92
1101	*Traveling Expenditure*	47,156,200.00	46,448,672.07	707,527.93
1201	*Stationary & Office Equipment*	1,289,500.00	1,269,843.12	19,656.88
1202	*Fuel and Lubricant*	13,546,089.00	13,342,204.58	203,884.42
1203	*Uniform*	931,000.00	916,855.00	14,145.00
1204	*Diet*	0.00	0.00	0.00
1205	*Medical Supplies*	1,175,000.00	120,540.00	1,054,460.00
1206	*Mechanical & Electrical Equipment*	323,500.00	318,383.90	5,116.10
1207	*Other Supplies*	1,711,500.00	1,681,912.78	29,587.22
1301	*Vehicle*	10,585,000.00	10,425,803.89	159,196.11
1302	*Plant Machinery & Equipment*	357,000.00	348,590.38	8,409.62
1303	*Building & Structure*	2,899,000.00	2,855,093.20	43,906.80
1304	*Other Supplies*	206,000.00	82,901.50	123,098.50
1401	*Transport*	3,245,911.00	3,116,547.75	129,363.25
1402	*Telecommunication*	1,783,000.00	1,743,829.12	39,170.88
1403	*Postal Charges*	215,000.00	189,348.50	25,651.50
1404	*Electricity & water*	3,368,000.00	3,285,146.99	82,853.01
1405	*Rental & Hire Charge*	62,000.00	31,279.56	30,720.44
1406	*Rates & Taxes*	174,000.00	54,241,64	119,758.36
1407	*Other Contractual Services*	432,500.00	405,330.25	27,169.75
1903	*Holiday warrants*	199,000.00	179,455.00	19,545.00
1905	*Others*	584,000.00	486,747.20	97,252.80
	Total	595,086,348.00	581,322,671.33	13,763,676.67

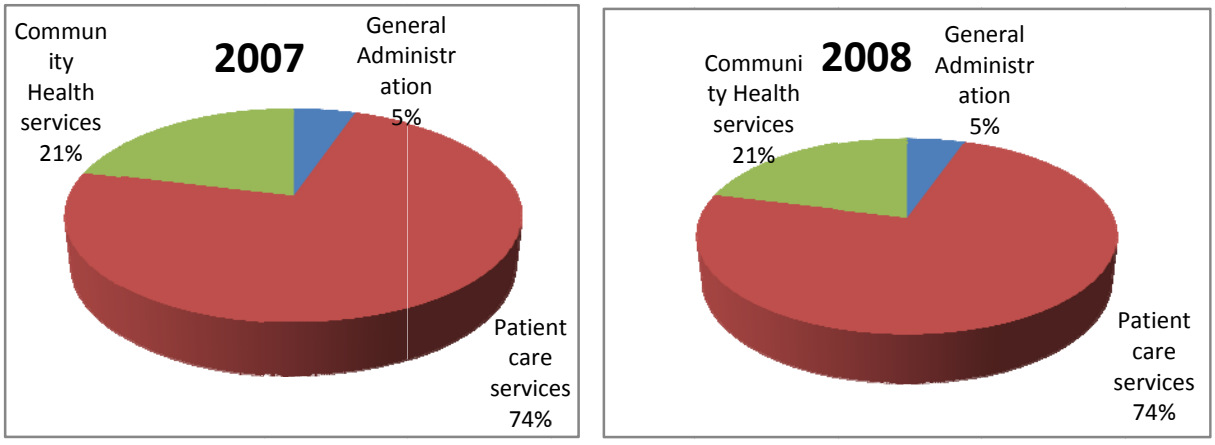
10.4 Summary of Health expenditure by Programmes

Table 10.4 Summary of Health expenditure by Programmes

	Programme	Total expenditure Rs	
		2007	2008
Recurrent Expenditure	General Administration	118,281,605.39	145,061,610.00
	Patient care services	1,677,842,884.67	2,026,041,068.00
	Community Health services	481,153,042.05	581,322,671.00
	Total	2,277,277,532.11	2,752,425,349.00

There is a 20 % increase of recurrent expenditure observed during year 2008, compared to 2007 in the Central Provincial Health Department. Out of the total recurrent expenditure, 73.6 % was spent on patient care services (curative care services) whereas 21.1% was spent on community health services (public health services).

Fig 10.2 Expenditure observed during year 2008, compared to 2007 in the Central Provincial Health Department.



Chapter-11

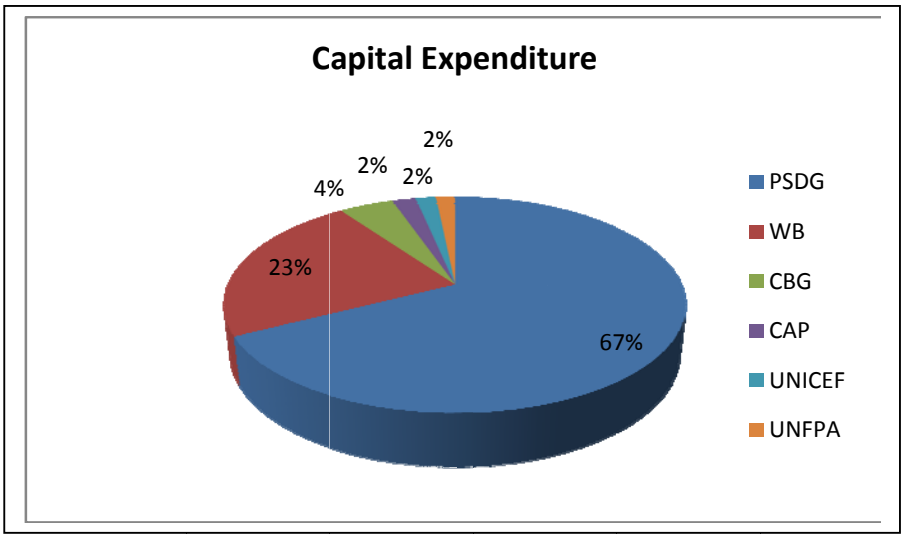
11. DEVELOPMENT PROJECTS

For the development of health sector in Central Province, different types of sources of funds for capital expenditure were utilized during the year 2008.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 11.1 Distribution of expenditure by Category of Development Projects – 2008 (RS. Million)

Expenditure Category	Approved Amount (Rs million)	Received Amount	Expenditure (as at December 31st 2008)	Percentage %
Provincial Specific Development Grants (PSDG)	362,235,000	235,977,506	232,977,506	98.73%
World Bank (WB)	114,000,000	114,000,000	78,711,437	69.05%
Criteria Based Grants (CBG)	23,250,000	16,000,000	15,672,662	97.95%
National Plan of Action for Children	12,000,000	6,822,986	6,822,986	100.00%
UNICEF	12,000,000	9,000,000	5,880,553	65.34%
UNFPA	38,000,000	5,500,000	5,500,000	100.00%
Total	561,485,000	387,300,492	345,565,144	89.22%

Fig 11.1 ***Distribution of expenditure by Category of Development Projects – 2008 (RS. Million)***



11.1 Health Sector Development Project – World Bank –2008

Table 11.2 Health Sector Development Project – World Bank –expenditure by Districts 2008

	PDHS Office	Kandy	Matale	N'Eliya
Approved Amount (Rs)	5,700,000	41,100,100	33,471,065	33,376,500
Actual Expenditure (Rs) (2008/12/31)	4,526,328	30,414,935	23,164,236	20,605,938
Progress (%)	79.41%	74.00%	69.21%	61.74%

Table 11.3 Progress of the projects under WB - by District

	NO .OF. PROJECTS-UNDER THE WB							
	PDHS Office		Kandy		Matale		N'Eliya	
	No. of. Projects	Completed by 31.12.2008	No. of. Projects	Completed by 31.12.2008	No. of. Projects	Completed by 31.12.2008	No. of. Projects	Completed by 31.12.2008
Constructions & Repairs	1	0	14	7	10	3	12	2
Provision of Surgical Equipments	1	1	16	15	12	10	11	6
Training Programmes	5 (54)	5 (54)	42 (219)	31 (219)	3 (14)	3 (12)	13 (151)	7 (93)
Other	1	0	1	1	7	5	2	1
Total	8	6	73	66	32	21	32	16

The details of activities done under this project is described at annexure .

11.2 Health Sector Development Project – Provincial Specific Development Grants (PSDG) - 2008

Table 11.4* PSDG *Financial Progress

	CENTRAL PROVINCE
Approved Amount (Rs)	362,235,000
Actual Expenditure (Rs) (2008/12/31)	232,977,506
Progress %	64.32%

Table 11.5 Progress of the project activities done under* PSDG *project

	No. of. projects - Central province	
	No.of. Projects	Completed
Construction, Repairs, Provision of Surgical Equipments	36	11

11.3 Health Sector Development Project- Criteria Based Grants (CBG) -2008

Table 11.6 CBG - Progress

	PDHS Office	Kandy	Matale	N'Eliya
Approved Amount (Rs)	9,494,465	6,633,686	3,275,000	3,846,848
Actual Expenditure (Rs) (2008/12/31)	6,332,463	4,471,051	989,707	3,879,439
Progress %	66.70%	67.40%	30.22%	100.85%

Table 11.7 Progress of the project activities done under CBG project .

	No.of. projects- Central province							
	PDHS Office		Kandy		Matale		N'Eliya	
	No.of Projects	Completed	No.of Projects	Completed	No. of. Projects	Completed	No.of. Projects	Completed
Construction & Repairs	2	2	12	6	5	2	1	1
Procument of Equipments	4	4	1	1			2	1
Total	6	6	13	7	5	2	3	2

11.4 Health Sector Development Project -Children Action Plan – 2008

Table 11.8 Children Action Plan Financial Progress

	Kandy	Matale	N'Eliya
Approved Amount (Rs)	5,000,000	3,500,000	3,500,000
Actual Expenditure (Rs) (2008/12/31)	3,930,431	1,450,000	1,442,555
Progress %	78.61%	41.43%	41.22%

Table 11.9 Project activities done under children action plan

	Kandy		Matale		N'Eliya	
	No.of. Projects	Completed	No.of. Projects	Completed	No.of. Projects	Completed
Construction Repairs	3	3	4	3	4	3
Procument	1	0	1	1	2	2
Training			1(15)	1(15)		
Total	4	3	6	5	6	5

11.5 Health Sector Development Project- UNICEF-2008 – Nuwaraeliya district

Table 11.10 UNICEF Financial Progress

	Nuwara Eliya
Approved Amount (Rs)	9,087,987
Actual Expenditure (Rs) (2008/12/31)	5,880,552
Progress %	64.71%

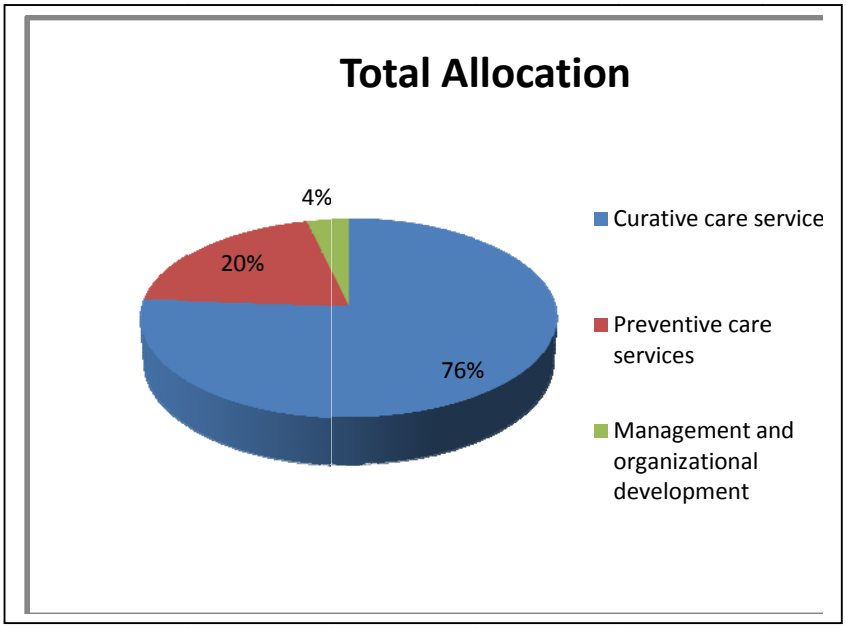
Table 11.11 Project activities done by UNICEF funds

	Nuwara Eliya	
	No.of. Projects	Completed
Construction Repairs	1	0
Procument		
Training	2	2
Other	2	2
Total	5	4

Table 11.12 Total allocations for development activities done under major 3 areas are indicated below.

Area	Total allocation	Percentage
Curative care services	398,663,186	76.15%
Preventive care services	105,792,879	20.21%
Management and organizational development	19,028,935	3.64%
Total	523,485,000	100.00%

Fig 11.2 Total allocations for development activities done under major 3 areas



Maternity Ward-DBH Rikillagaskada Dickoya

Medical Officers' on call room-DBH

Pediatric Ward –DH Agarapathana.

Mortuary-DGH Matale

Theatre Complex-DBH Dambulla

OPD building – DGH Nawalapitiya

Detailed Tables

Annexure (1) Number of Health Institutions and Field Areas in Kandy District (under Central Province Health department)

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
1	Akurana	03	18	-	-	01	03
2	Galagedara	03	15	-	-	01	01
3	GangaIhala	03	20	-	-	03	-
4	Hatharaliyadde	02	17	-	-	02	02
5	GangawataKorale	02	18	-	-	01	02
6	Hasalaka	03	19	-	-	06	-
7	Kundasale	04	30	-	-	04	01
8	Medadumbara	04	24	-	-	03	02
9	Nawalapitiya	03	18	01	-	-	01
10	Panvila	02	18	-	-	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
21	Manikhinna	02	20			04	00
22	Bambaradeniya	02	16			02	01
	Total	73	470	1	-	54	28

- 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.

Annexure (2) Number of Health Institutions and Field Areas in Nuwaraeliya District (under Central Province Health department) in 2008

	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	Ambagamuwa	06	41	-	-	03	03
5	walapane	04	23	-	-	04	04
6	Maturata	02	16			03	01
7	Nawatispane	02	20			01	04
8	Haguranketa	03	04		01	04	00
9	Bagawantalawa	02	22			01	00
10	Ragala	04	25			03	03
11	Lidula	03	29			03	00
12	Kotagala	03	24			01	00
	Total	42	262	-	02	29	25

- DGH Nuwaraeliya comes under Line Ministry

Annexure (3) Number of Health Institutions and Field Areas in Matale District (under Central Province Health department)

	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.

Annexure (4) Curative Care Institutions in central province by District

CATEGORY	KANDY	MATALE	NUWARAELIYA
PRIMARY CARE	DH AKURANA DH ANKUMBURA DH DELTOTA DH DOLOSBAGE DH GALAGEDARA DH KADUGANNAWA DH MADOLKELE DH MAMPITIYA DH MENIKHINNA DH PUSSALLAWA DH UDADUMBARA DH KATUGASTOTA DH WATTEGAMA DH SANGARAJAPURA DH MEDAWALA DH MINIPE DH PANVILATENNA DH MARASSANA DH HASALAKA DH TITHTHAPAJJALA DH WATTAPPOLA DH KOTALIGODA DH PAMUNUWA DH GELIOYA DH BAMBARADENIYA DH HATHARALIYADDA DH THALATHUOYA DH UDUWELA DH GALAHA DH YAKGAHAPITIYA DH NARAMPANAWA DH GALPIHILLA DH JAMBUGAHAPITIYA DH KURUDUWATTE DH KAHAWATTE DH UDAGAMA ATABAGE DH BATUMULLA DH MEDAMAHANUWARA DH AMBAGAHAPALASSA DH KOLONGODA DH MORAHENA DH BOKKAWALA DH DUNHINNA DH THELDENIYA DH ULAPANE DH MURUTHALAWA DH PATTIYAGAMA PALLEGAMA	DH GALEWELA DH RATTOTA DH LAGGALA PALLEGAMA DH NALANDA DH MADIPOLA DH HETTIPOLA DH KONGAHAWELA DH MUWANDENIYA DH YATAWATTE DH HADUNGAMUWA DH OVILIKANDA DH LENADORA DH MARAKA DH HATTOTA AMUNA DH GAMMADUWA DH ILUKKUMBURA DH SIGIRIYA	DH AGARAPATHANA DH BOGAWANTHALAWA DH NILDANDAHINNA DH KOTAGALA DH LINDULA DH MASKELIYA DH MATURATA DH UDAPUSSALLAWA DH WALAPANE DH THERIPAHA DH MALDENIYA DH WATAWALA DH KOTHMALE DH GINIGATHHENA DH LAXAPANA DH HIGH FOREST DH GONAPITIYA DH N/ MEDAKUMBURA DH DAYAGAMA DH GONAGANTENNA DH HANGURANKETHE DH MOOLOYA DH MANDARANNUWARA

	PMCU ALAWATHUGODA PMCU KURUGODA PMCU MAHAKANDA PMCU MAILAPITIYA PMCU MAKULDENIYA PMCU MADAWALA BAZAR PMCU MAWATHURA PMCU POOJAPITIYA PMCU RAMBUKEELA PMCU RAJAWALLA PMCU SUDUHUMPOLA PMCU WELAMBODA 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 PMCU KALUGAMUWA	PMCU ALUVIHARE PMCU DULLEWA PMCU ELKADUWA PMCU KALUNDEWA PMCU ALUTHWEWA PMCU MADAWALA ULPATHE PMCU OPALGALA PMCU PALDENIYA PMCU PALLEPOLA PMCU WAHAKOTTE PMCU WAWALAWEWA PMCU UKUWELA PMCU GURUBABILA PMCU DEWAHUWA PMCU KANDENUWARA	PMCU AMBEWELA PMCU HATTON PMCU HANGARAPITIYA PMCU KANDAPOLA PMCU KURUPANAWELA PMCU KEERTHIBANDARAPURA PMCU KATABULAWA PMCU KALAGANWATTE PMCU MADULLA PMCU MUNWATTE PMCU MANAKOLA PMCU MASWELA PMCU NAWATHISPANE PMCU WIDULIPURA PMCU NANUOYA PMCU PUNDALUOYA PMCU RAGALA PMCU RUPAHA PMCU UPKOT PMCU WIJEBAHUKANDA PMCU HAPUGASTHALAWA
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		

	Kandy	Matale	N' Eliya
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 TRAINING CENTER KADUGANNAWA B.M.E.S UNIT WATAPULUWA	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

Annexure (7) Leading Causes of live Discharges for the year 2007 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)	28367	1
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	24568	2
195	Single spontaneous delivery (O80)	18194	3
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	14200	4
245	Undiagnosed / Uncoded	14039	5
217	Other signs and symptoms and abnormal clinical findings (R25-R49,R52,R53,R55,R57-R69)	13651	6
150	Asthma (J45-J46)	13460	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,T06.3,T09.1,T11.1,T11.4,T13 .1, T13.4, T14.1, T14.5)	11784	8
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-TO9.5,T09.8,T09.9,T11.5, T11.8,T11.9,T13.5,T13.8,T13.9, T14.6,T14.8,T14.9)	10228	9
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0,T14.0)	9517	10
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	9031	11
125	Essential hypertension (I10)	8940	12
156	Gastritis and duodenitis (K29)	8762	13

Annexure (8) Leading Causes of live Discharges for the year 2007 in Matale District.

Diseases Code (IMMR Code)	Disease and ICD code	Number	Rank
195	Single spontaneous delivery (O80)	6199	1
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,T06.3,T09.1,T11.1,T 11.4,T13.1, T13.4, T14.1, T14.5)	5780	2
150	Asthma (J45-J46)	4091	3
245	Undiagnosed / Uncoded	3698	4
243	Persons encountering health services for examination, investigation and for specific procedures of health care (Z00-Z13,Z40-Z54)	3528	5
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	3442	6
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0,T14.0)	3405	7
119	Other diseases of the eye and adnexa (H00-H11,H20,H21,H30,H31,H34,H35,H43-H47,H51-H59)	3404	8
156	Gastritis and duodenitis (K29)	3137	9
167	Infections of skin and subcutaneous tissue (L00-L08)	2594	10
211	Symptoms and signs involving the digestive system and abdomen (R10-R19)	2517	11
186	Other disorders of the female genito-urinary system (N71-N80,N82-N98,N99.2,N99.3)	2502	12
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	2403	13

Annexure (9) - Leading Causes of live Discharges for the year 2007 in Nuwaraeliya District.

Diseases Code (IMMR Code)	Disease and ICD code	Number	Rank
195	Single spontaneous delivery (O80)	8275	1
245	Undiagnosed / Uncoded	7335	2
220	Superficial injury (S00,S10,S20,S30,S40,S50,S60,S70,S80,S90, T00,T09.0,T11.0,T13.0,T14.0)	5320	3
042	Other viral diseases(includes viral fever)(A81,A88,A89,B00,B03,B04,B07-09,B25,B27-B34)	4911	4
150	Asthma (J45-J46)	3878	5
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,T06.3,T09.1,T11.1, T11.4,T13.1, T13.4, T14.1, T14.5)	3593	6
006	Diarrhoea and gastroenteritis of presumed infectious origin (A09)	3306	7
156	Gastritis and duodenitis (K29)	3169	8
125	Essential hypertension (I10)	2480	9
152	Other diseases of the respiratory system(J22,J60-J98)	2168	10
196	Other complications of pregnancy and delivery (020-029,060-063,067-071,073-075,081-084)	1997	11
143	Other acute upper respiratory infections (J00,J02,J04-J06)	1781	12
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-TO9.5,T09.8,T09.9,T11.5, T11.8,T11.9,T13.5,T13.8,T13.9, T14.6,T14.8,T14.9)	1584	13
180	Other diseases of the urinary system (N13-N15, N25-N28,N30-N39,N99.0,N99.1,N99.4,N99.5)	1275	14

Annexure (10) Leading Causes of Hospital Deaths for the year 2007 in Kandy District.

Diseases Code (IMMR Code)	Disease and ICD code	Number	Rank
245	Undiagnosed / Uncoded	453	1
134	Cerebroavascular disease (I60-I69)	346	2
128	Acute myocardial infarction (I21,I22)	318	3
219	Ill-defined and unknown causes of mortality (R95-R99)	286	4
132	Heart failure (I50)	180	5
129	Other ischaemic heart disease (I20,I23-I25)	170	6
177	Renal failure (N17-N19)	161	7
145	Pneumonia (J12-J18)	148	8
022	Septicaemia (A40,A41)	124	9
149	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40-J44)	115	10
133	Other heart diseases (I27.0-I27.8, I28-I49,I51)	93	11
201	Intrauterine hypoxia, birth asphyxia and other respiratory disorders originating in the perinatal period (P20-P28)	82	12
125	Essential hypertension (I10)	74	13

Annexure (11) Leading Causes of Hospital Deaths for the year 2007 in Matale District.

Diseases Code (IMMR Code)	Disease and ICD code	Number	Rank
134	Cerebroavascular disease (I60-I69)	61	1
132	Heart failure (I50)	42	2
149	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40-J44)	39	3
128	Acute myocardial infarction (I21,I22)	37	4
129	Other ischaemic heart disease (I20,I23-I25)	33	5
125	Essential hypertension (I10)	22	6
235	Toxic effects of organophosphate and carbamate insecticides (T60.0)	15	7
150	Asthma (J45-J46)	14	8
203	Other conditions originating in the perinatal period (P08,P29,P35.1-P39,P50-P54,P56-P96)	14	9
133	Other heart diseases (I27.0-I27.8, I28-I49,I51)	13	10
162	Alcoholic liver disease (K70)	12	11
219	Ill-defined and unknown causes of mortality (R95-R99)	12	12
236	Toxic effects of other pesticides (T60.1-T60.9)	12	13
177	Renal failure (N17-N19)	11	14
199	Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05-P07)	11	14

Annexure (12) Leading Causes of Hospital Deaths for the year 2007 in Nuwaraeliya District.

Diseases Code (IMMR Code)	Disease and ICD code	Number	Rank
128	Acute myocardial infarction (I21,I22)	77	1
245	Undiagnosed / Uncoded	77	1
199	Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05-P07)	66	3
134	Cerebroavascular disease (I60-I69)	39	4
235	Toxic effects of organophosphate and carbamate insecticides (T60.0)	33	5
132	Heart failure (I50)	32	6
129	Other ischaemic heart disease (I20,I23-I25)	30	7
133	Other heart diseases (I27.0-I27.8, I28-I49,I51)	25	8
125	Essential hypertension (I10)	21	9
150	Asthma (J45-J46)	18	10
127	Other hypertensive diseases (I12-I15)	16	11
177	Renal failure (N17-N19)	15	12
233	All other burns and corrosions (T20-T25,T27-T32)	15	13
203	Other conditions originating in the perinatal period (P08,P29,P35.1-P39,P50-P54,P56-P96)	14	14

Annexure (13) World Bank-Provincial Director of Health Services Office

- Construction of retaining wall at PDHS premises.
- Reconstruction external rainwater drains.
- Refurbishment of PDHS office
- Provincial training programmes, workshop & exhibition
- Provincial Progress review, publishing of annual report and telephone directory.

World Bank-Kandy District

(I) **Constructions & Repairs**

- Completion of balance work of Pattiya Pallegama MCH clinic.
- Second Stage of the Construction of MOH office building at Wattegama with retaining wall.
- Construction of Ambulance garage at DH Manikhinna
- Construction of MO Quarters (Stage 2) ETU Unit at DH Dolosbage.
- Construction of Toilet of at DH Bokkawala.
- Repair of Exiting road at MOH Galagedara.
- Improve facilities of one EPI clinic from each MOH area.
- Repairs of Ambulance garage at RH Galaha.
- Repairs of Setunga bungalow at DGH Nawalapitiya.
- Essential repairs of Kitchen & Quarters of RH Hatharaliyadda
- Repairs of toilets, doctors on call room at RH Yakgahapitiya.

(II) Provision of Surgical & Other Equipments

- Equipments to DGH Nawalapitiya (Portable x-ray machine, Anesthetic machine, spectrophotometer, defibrillators)
- Equipments to MCH clinic centers (plastic chairs, cupboards, Bp Apparatus, Examination Beds, Oxygen regulators, Suckers)
- Dental Chairs for five school Dental Clinics
- Mini Auto clave 05
- Electric Dental Units
- Electric Dental chairs and units for five hospital, Dental clinic
- Multimedia projectors for 04 MOH offices of RDHS – Kandy
- Digital camera and public addressing system for Health Education unit
- Procurement of 4 wheel single cab to be used in the Dog vaccination programmers to rabies unit
- 4 CD/DVD/Players for MOH office
- Procurement of Duplo machine for RDHS Kandy
- Procurement of DP injections for dog control programme
- Procurement of Furniture for health institutions

(III) Training Programmes

- Conducting taining on EMOC for the nurses and midwives in DGH Nawalapitiya,TH Gampola, DH Akurana
- Training on Health promoting school to public health staff.
- Training on RHFP and counseling public health staff.
- Training on nutritional activities public health
- Training programme in Basic Counseling skills for MOO/MOHS
- Training on basic life Support to public health hospital staff
- Early childhood caries Awareness & prevention workshop for dental surgeons.
- Training programme for school dental therapists
- Training programme for clinic assistants
- Awareness programme and conducting screening clincs, TOTon healthy life style and NCD prevention.
- Training programme for food handles on food and waterborne diseases.
- One day training programme for MOO and RMOO on NCD prevention.
- Review meeting for MRA in hospitals.
- Review meeting for Avian Influenza district committee.
- In service Training programmes for PHII.
- BCC Programme on occupational health for factory owners and workers.
- TOT programme on Health life style and NCD prevention for educational personnel.
- Conducting awareness programmes for three-wheeler drivers , factory workers who are expecting to go for foreign workers.
- Training programme for Sunday school teachers on mental health.
- Training programme for police officers on mental health
- Training programme for officers on privet sector & head of the department on mental health
- Training programme for volunteers on mental health
- Awareness programme on drug regulations for the owners of pharmacies.

World Bank-Matale District

(I) Constructions

- Construction of mortuary(Second Stage) at DGH Matale

(II) Repairs

- Repairs to toilets of pediatric ward at DGH Matale
- Repairs to wards , OPD building ,medical officer quarter at DH Madipola
- Repairs to Wards at DH Koongahawela.
- Repairs to Wards and drainage System at DBH Dambulla
- Repairs to PHM Quarters and mortuary at DH Galewela
- Repairs to dental clinic at DH Rattota
- Repairs to MOH Galewela
- Repairs to wards , OPD building ,& quarter at DH Maraka

(III) Provision of Surgical & Other Equipments

- Provision of infant weighing scales for MOH
- Provision of uri strips for ANC
- Provision of a CTG Machine for DGH Matale
- Provision of equipments to regional dental services.
- Provision of physiotherapy equipments.

- Provision of DP injections for dog control programme and training for rabies control unit.
- Provision of a duplex machine and multimedia projector to public health unit at DBH Dambulla.
- Provision of a duplex machine at DGH Matale.
- Provision of computers, printers and tables to selected institutions.
- Provision of a generator at RDHS Office-Matale.
- Provision of name board to selected institute

(IV) Training Programmes

- Selected institutions staff training
- Foreign training
- Monitoring & evolution of the programme.

(V) Other

- MCH Survey at all MOH areas.
- EPI Survey
- Conducting health village programme.

World Bank-Nuwara Eliya District

(I) Constructions

- Construction of pediatric ward atDH Agarapathana.
- Construction of OPD buiding at DH Lakshapana
- Construction of on call rooms at DBH Rikillagaskada & DBH Dikoya,
- Construction of Corridor at DBH Dickoya.

(II) Repairs

- Repair of kitchen, wards, lab, & toilet at DH Ginigathena.
- Repair of blood bank at DBH Rikillagaskada.
- Repair of x-ray room at DBH Dickoya
- Repair of Consultant quarters at DBH Rikillagaskada.
- Repair of maternity ward at DBH Rikillagaskada.
- Repair of mortuary at DBH Rikillagaskada.

(III) Provision of Surgical and other Equipments

- Provision of office equipments for all MOH
- Provision of 5 mini auto claves.
- Provision of 4 dental units.
- Provision of laboratory equipments for DBH Rikillagaskada.
- Provision of medical, surgical & other office equipment for new OPD building at CD Kalaganwathta.
- Provision of oxygen cylinders & regulators.
- Provision of equipments for quarters wards & offices at DBH Dickoya & DBH Rikillagaskada.

(IV) Training Programmes

- Continuation VOG Strengthened out reach clinics
- Training of PHNS SPHM & PPO to improve statistical skills.
- Oral Cancer detection programme.
- Participatory training techniques & health planning.
- Training on behavior change and Communication for estate health staff PHC Staff.
- Awareness programmes on gender based violence and prevention.
- Awareness programmes on active ageing and chronic diseases prevention.
- Programs on healthy life style & health promotion.
- Strengthening effective communication & public relation skills of hospital staff.
- Training Programme for relevant curative and preventive health staff on preparedness for bird flu
- Awareness progrenne for food handles. Regarding food & sanitation.

Annexure (14) Health Sector Development Project –PSDG-Kandy District

(I) Constructions

- Construction of OPD building to DGH Nawalapitiya (Stage IV)

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 Sewerage System to DBH Dambulla.
- Construction of Theater Complex to DBH Dambulla.
- Repairs of CD Ukuwela & CD Aluwihare.
- Provision of post mortum table to DBH Dambulla.

Health Sector Development Project –PSDG-N' Eliya District

(I) Constructions

- Construction of Maternity Ward (Stage II) to DBH Rikillagaskada.
- Repairs of CD Pundaluoya & CD Maldeniya

Annexure (15) CBG

PDHS Office and institutions directly under PDHS office

- Repair of Water line to Rehabilitation Hospital Digana.
- Construction of fence to Rehabilitation Hospital Digana.
- Construction of retaining wall at clinic centre Dehianga
- Provision of surgical equipment & other equipment chest clinic Kandy
- Provision of surgical equipment to Rehabilitation Hospital Digana.
- Provision of equipment to Kadugannawa training centre

CBG –Kandy District

- Construction of room for pregnant mother to MOH office Nawalapitiya.
- Construction of corridor to DGH Nawalapitiya.
- Construction of roof to STD Unit , kandy
- Repair of Udaaludeniya clinic center.
- Repair of Entrance road to MOH Pujapitiya.
- Repair of DH Marassana.
- Repair of Male ward DH Galagedara.
- Repair of DH Madolkale.
- Repair of ward, toilet, kitchen to DH Jambugahapitiya.
- Repair of roof to DH Manikhinna.

CBG –Matale District

- Repair of ward & OPD building at DH Muwandeniya/DH Laliambe/DH Handungamuwa/DH Hattotaamuna
- Construction of exsiting road at clinic centre Wallewela.

CBG –N'Eliya District

- Construction of fence at DH Bagawantalawa.
- Provision of anesthetic machine & ventilator machine to DH Dickoya.
- Provision of 3 computer at RDHS Office N'Eliya.

Annexure (16)Children Action Plan

Matale District.

- Provision of furniture to paediatric and maternity wards of the hospitals and health centers of the district.
- Construction of a Health center at Guralawela.
- Continuation work of Kandegedara Health Center.
- Continuation work of Wallewela Health Center.
- Conduction of early childhood caries prevention awareness programme.
- Infection Control Project at DBH Dambulla.

Kandy District.

- Procument of BP Apparatus to clinic centres.
- Balance work of the construction of new MCH clinic at pupuressa.
- Balance work of the construction of retaining wall at madolkele clinic center.
- Completion of Rakshawa clinic.

Nuwara Eliya District.

- Procurement of Nebulizers, children cots and mattress for hospitals
- Procurement of Glucose strips.
- Repairs of Health Center at Batagalla.
- Repairs of MOH Office at kothmale.
- Repairs of Health Center at Ragala.
- Repairs of Health Center at Kalaweldaniya.

Annexure (17) Health Sector Development Project -UNICEF

Nuwara Eliya District.

- Second state construction of MOH office Rikillagaskada.
- Field staff training on post partum maternal care .
- Baseline survey to identify mean weight gain during pregnancy in all MOOH
- Training of healthl staff on integrated package of adolescents,pre pregnant and pregnancy to improve maternal weight gain during pregnancy.
- Toilet Construction project-land slide victims.

ABBREVIATIONS

1.	ANC	Ante Natal Clinic.
2.	AMC	Anti Malaria Campaign.
3.	BCG	Bacillus Calmette and Guanine Vaccine
4.	BH	Base Hospital.
5.	CBR	Crude Birth Rate.
6.	CDR	Crude Death Rate.
7.	CP	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/MOH	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.	MOH	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. TB	Tuberculosis