Volume 192

## EPIDEMIOLOGICAL BULLETIN

## **SRI LANKA**

Third Quarter 2011

# **EPIDEMIOLOGY UNIT**

A publication of the Epidemiology Unit Ministry Of Health No. 231, De Saram Place, Colombo.10 www.epid.gov.lk

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#### 1. POLIOMYELITIS

Twenty five (25) Acute Flaccid Paralysis (AFP) cases have been notified to the Epidemiology Unit during the 3<sup>rd</sup> quarter 2011. This is almost equal to 23 cases reported during the corresponding guarter in 2010. This number is below the expected number of AFP cases per quarter which is 31 according to WHO surveillance criteria making up the reporting rate of 81%. (according to 2011 updated estimated population data based on the Population Census) The expected number of AFP cases according to WHO requirement is non-polio AFP rate of 2 per every 100,000 under 15 population which makes upto 124 AFP cases per year. However, the non Polio AFP rate calculated for the quarter is 1.5/100,000 under 15 population.

#### **Notification of AFP Cases from Hospitals**

Only the following sentinel site hospitals have reported AFP cases during the 3<sup>rd</sup> quarter 2011. Teaching Hospital Kandy (5), LRH (4) and Teaching Hospital Peradeniya (3) have reported the majority of cases. The list of hospitals which reported AFP cases with the number reported in the guarter are given below.

Table 01

Notification of AFP cases by sentinel
Hospital 3rd Quarter 2011

Hospital	Number reported
LRH	4
NCTH(Ragama)	1
TH Karapitiya	1
GH Matara	1
GH Anuradhapura	1
TH Jaffna	1
TH Peradeniya	3
TH Kandy	5
GH Nuwara Eliya	2
BH Dikoya	1
BH Diyathalawa	2
TH Baticaloa	1
GH Moneragala	2
TOTAL	25

### Distribution of AFP Cases according to Provinces, Districts & MOH Areas

Districts of Nuwara Eliya (6) and Kandy (2) from the Central Province have reported the highest proportion of cases (32%) for the quarter. Comparing reported cases in the compatible quarter in 2010, districts of Gampaha and Kalutara in the Western Province have reported the highest proportion (40%) of the reported cases. Other provinces, districts and Medical Officer of Health (MOH) areas with reported number of cases are given in the table below.

Table 02. Distribution of AFP cases by district & MOH area, 3<sup>rd</sup> quarter 2011

Province	District	MOOH Area	Number of AFP cases
Western (3)	Gampaha	Kelaniya	1
		Minuwan- goda	1
		Meerigama	1
Southern (2)	Galle	Baddegama	1
Central (8)	Matara Kandy	Welipitiya Kundasale	1
		Gampola	1
	Nuwara Eliya	Ambaga- muwa	2
		Maskeliya	1
		Nuwara Eliya	1
		Bagawantha- lawa	1
		Ragala	1
Sabaragamuwa (1)	Kegalle	Kegalle	1
North Western (2)	Kurunegala	Alawwa	1
		Udubaddawa	1
Eastern (2)	Ampara	Dehiatta- kandiya	1
	Baticaloa	Kanthankudi	1
North Central (1)	Anurad- hapura	Thmbuththeg ama	1
Uva (5)	Monera- gala	Buttala	1
		Siyambalan- duwa	1
	Badulla	Welimada	1
		Uvaparana- gama	1
North (1)	1		
Total			25

#### Seasonal Distribution of AFP Cases

The month of September 2011 reported the maximum number (12) of cases for the quarter comprising the proportion of 48% and this proportion is in contrast to the compatible quarter in 2010 which reported the highest proportion in the month of July (40%). During the months of July and August cases reported were 28% and 24% respectively during 3<sup>rd</sup> quarter 2011.

#### Age and Sex Distribution of AFP Cases

Majority of the AFP cases (11, 44%) reported in the 3<sup>rd</sup> quarter this year was between 5-9 years of age, compared to 1-4 years of age (48%) during the corresponding quarter in the previous year. In this quarter, 9 (36%) of reported children belonged to 1-4 year age group. The sex ratio of reported AFP cases for the quarter was 3:2 in male :female and contrast with the pattern of over half (61%) of the cases were male which was observed during the 3<sup>rd</sup> quarter in the previous year .

The table below shows the age and sex distribution in 3<sup>rd</sup> quarter 2011.

Table 03. Distribution of AFP cases by Age & Sex, 3rd Quarter 2011

#### **Laboratory Surveillance of AFP Cases**

Age Group	Sex		Total
	Male	Female	
<1 year old	0	0	0
1-4 year old	5	4	9
5-9 year old	7	4	11
10-14 year old	3	2	5
Total	15	10	25

Two stool samples collected within 14 days of onset of paralysis are required at the virology Laboratory in the Medical Research Institute for polio virology. According to WHO criteria these samples should be of 'good condition' as well as timely. Being of correct quantity (8-10g), being sent in a leak proof container with no evidence of spillage or leakage and presence of ice in the container on receipt are the criteria to make the samples of 'good condition'. Timely adequate (good/accepted) stool collection rate for the quarter is 84% and the WHO target of timely stool collection rate is 80%. Twenty one out of the 25 cases were able to collect 2 stool samples within first 14 days of the onset of paralysis and 4 cases collected late stool samples but the reasons for late stool collection was transfers from one hospital to the other.

#### Sentinel site reporting of AFP cases

Sentinel site hospital is a hospital identified as where services of a Consultant Paediatrician is available for adequate patient management presented with any differential diagnosis of AFP. During 2011 sentinel site hospitals were updated and 8 new hospitals were added to the list of 57 previously functioning sentinel site hospitals. All sentinel surveillance site hospitals of AFP are expected to send a weekly return to the Epidemiology Unit including a "nil" return in the absence of AFP cases and completeness and timeliness of this return is closely monitored. Out of all sentinel sites Base Hospital Mullativu did not function as a sentinel site.

The completeness of sentinel site (57) reporting for the quarter was 93% and this was an improvement compared to the compatible quarter in the previous of which was 86%. This is satisfying the WHO monitoring indicator of >80%. But timeliness in receiving the reports at the Epidemiology Unit is around 50% which is much lower than the expected timeliness of >80%.

#### 2. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 3rd Quarter 2011. Last case of cholera was reported in the country in January 2003.

#### 3. TETANUS

During the 3rd Quarter 2011, 08 suspected Tetanus cases were notified to the Epidemiology Unit. This is in comparison to 06 cases in the previous quater .

#### 4. MEASLES

Thirty two suspected Measles cases were reported during the third quarter 2011 and out of them 25 were field investigated and identified as clinically possible cases. This is in contrast with the 25 suspected cases and 17 clinically possible cases during the third quarter 2010. Seven of these field investigated cases were compatible with the surveillance case definition of measles which is "fever and rash with one of the signs of cough, coryza or conjunctivitis". Majority (6) of them were between 20-29 years and majority were males (5). These clinically confirmed cases were reported from the districts of Colombo (Homagama, Maharagama, Hanwella), Gampaha (MC Negombo), Kandy (Kundasale), Polonnaruwa (Dimbulagala) and Badulla (Haliela). Fever and rash patients suspected of Rubella/ Measles admitted to any hospital, or treated as an out patient in OPD or presented to General Practitioners or if primary health personnel identified in the community are requested to investigate by testing IgM for Measles/ Rubella, ideally a blood sample collected within 3<sup>rd</sup> to 28 day of the onset of rash. Importance of laboratory confirmation is highlighted and requested to send 3ml blood/serum sample to the virology laboratory at the Medical Research Institute (MRI). Ninety six (96) of such patients were tested at the laboratory during the 3<sup>rd</sup> quarter 2011 and only one patient,

10 month old was positive for Measles IgM antibodies but measles virus was not isolated. Outbreaks of measles were not reported during the quarter.

Table 04

SELECTED CHARACTERISTICS OF CONFIRMED CASES (WITH SPECIAL INVESTIGATIONS) OF MEASLES – 3rd QUARTER 2011

Sex	Male	5
	Female	2
A 22 25005	10-19 years	1
Age group	20-29 years	6
	Non immunized	1
Immunization status	Immunized	3
	Unknown	3

#### 5. LEPTOSPIROSIS

During the 3rd Quarter 2011, 1174 cases and 19 deaths (CFR 1.6%) due to Leptospirosis were notified to the Epidemiology Unit compared to 1930 cases and 14 deaths in the previous quarter and 926 cases and 35 deaths during corresponding quarter of 2010.

Age and sex distribution of patients, revealed by the special surveillance data is given in table 05

Table05

SELECTED CHARACTERISTICS OF LEPTOSPIROSIS PATIENTS(%)- 3rd QUARTER 2011

Age Group	Sex		
	Male	Female	
0-10 years	0.8	0.2	
11-20 years	9.8	1.4	
21-30 years	18.2	1.8	
31-40 years	21.1	4.0	
41-50 years	14.2	3.4	
51-60 years	14.7	2.9	
>60years	6.4	1.1	

#### 6. HUMAN RABIES

Ten cases of Human Rabies were notified to the Epidemiology unit in the 3rd quarter 2011. Compared to 12 cases in the previous quarter and 5 cases in the corresponding quarter year 2010.

Gampaha, Galle and Batticaloa districts reported the highest number of cases (2 cases in each district) accounting for 20% of the total case load followed by Kaluthara (1 case i.e 10%), Kurunegala (1 case i.e 10%), Hambanthota (1 case i.e 10%), and Puttlam (1 case i.e 10%).

#### **Animal Rabies**

During the quarter 150 dogs were reported positive for rabies, compared to 107 in the previous quarter and 113 positive in the same period in the last year. In addition the following animals were also reported positive;

Cats -22, Domestic Ruminants -01,

Wild Animals - 01

#### **Rabies Control Activities**

**Dog vaccination** - A total of 322878 dogs were immunized during the 3rd Quarter 2011 when compared to 288889 in the previous quarter and 307400 in the corresponding quarter of last year.

#### **Animal Birth Control**

**Chemical** - 16501 female dogs were injected with birth control injections (Progesterone) during the quarter under review.

**Surgical** - 33576 female dogs were subjected to sterilization by surgical method during the quarter under review.

\*Source - Director/PHVS

#### 7. ENTERIC FEVER

In the 3rd Quarter 2011, a total of 469 cases of Enteric fever were reported to the Epidemiology Unit, compared to 280 cases in the previous quarter and 427cases in the corresponding quarter of 2010. The district of Colombo (128) reported the highest number of cases. Followed by Jaffna (68cases) and Gampaha (46cases).

#### 8. VIRAL HEPATITIS

In the 3rd Quarter 2011, 541 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to 220 cases in the previous quarter and 424cases in the corresponding quarter of 2010.Gampaha district reported the highest number of cases (213) and Kegalle (118 cases) and Monaragala was third with 37 cases.

#### 9. DYSENTERY

In the 3rd Quarter 2011, 1673 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 2224 cases in the previous quarter and 1612 cases in the corresponding quarter of 2010. Badulla (159 cases), Rathnapura (141 cases), Jaffna (139 cases), reported the highest number of cases.

#### 10. MALARIA

The number of positive cases detected during the 3rd quarter of 2011 shows a 91% reduction in comparison to the number of positives detected during the corresponding period of 2010.

### 11.JAPANESE ENCEPHALITIS (JE)

During the 3<sup>rd</sup> quarter 2011, 29 cases of Acute Encephalitis had been reported to the Epidemiology Unit through the Weekly Return of Communicable Disease (WRCD). The number of cases that was subject to case-based investigation during the 3<sup>rd</sup> quarter was eight. these eight cases, 3 (37.5%) were laboratory confirmed as JE. Two (66%) confirmed JE cases were in the age category of 31- 40 years while the other case was in the age group of 51-60 years. Confirmed JE cases reported through the WRCD were from Gampaha (2) and Galle (1). They were from Welivitiya, Minuwangoda and Katana MOH areas. However, the status of immunization with JE vaccination was unknown for the confirmed JE patients. In the corresponding quarter of the 2010, 65 Acute Encephalitis cases and five laboratory confirmed JE cases had been reported through the WRCD. Similar to the corresponding quarter in 2010, No deaths had been reported due to JE during the 3rd quarter of the 2011.

Table 06 SELECTED CHARACTERISTICS OF CON-FIRMED CASES OF JE - 3rd QUARTER 2011

Sex	Male	01
	Female	02
Age group	31-40Y	2
	51-60Y	1
District	Galle	01
	Gampaha	02
MOH Areas	Welivitiya	01
	Minuwangoda	01
	Katana	01
Immunization	Immunized	00
	Non immunized	00
	Unknown	03

Table 07 Results of Blood smear examination for malaria parasites - 3rd Quarter 2011

	3rd Quarter 2010	3rd Quarter 2011
No. of blood smears examined	246437	250999
No. of positives	171	15
No. of <i>P. vivax</i>	169	15
No. of <i>P. falciparum</i>	2	0
No. of mixed infections	0	0
No. of infant positives	0	0
Slide positivity rate (S.P.R.)	0.07%	0.01%
P.v. : P.f. ratio	85 : 1	15 : 0
Percentage of infant positives	0%	0%

Table 08

### DISTRIBUTION OF MALARIA CASES BY RMO DIVISION - 3RD QUARTER 2011

RMO	Blood smears	Po	sitives	P.v.	P.f.	Mixed
Colombo	12431		0	0	0	0
Gampaha	9087		0	0	0	0
Kalutara	3475		0	0	0	0
Kandy	9327		0	0	0	0
Matale	5568		0	0	0	0
Nuwara Eliya	1030		0	0	0	0
Galle	3875		0	0	0	0
Matara	4996		0	0	0	0
Hambantota	7014		1	1	0	0
Jaffna	15528		0	0	0	0
Kilinochchi	17871		3	3	0	0
Vavuniya	10024		3	3	0	0
Mannar	7003		1	1	0	0
Mullaitivu	8135		4	4	0	0
Batticaloa	21180		0	0	0	0
Ampara	7395		0	0	0	0
Kalmune	10041		0	0	0	0
Tricomalie	20173		1	1	0	0
Kurunegala	13364		0	0	0	0
Maho	3858		0	0	0	0
Puttalam	5680		0	0	0	00
Anuradhapura	20559		0	0	0	0
Pollonnaruwa	12460		0	0	0	0
Badulla	4528		0	0	0	0
Monaragala	9158		2	2	0	0
Rathnapura	5534		0	0	0	0
Kegalle	1705		0	0	0	0
TOTAL	250999		15	15	0	0

P.v.- Plasmodium vivax

P.f.- Plasmodium falciparum

## 12. DENGUE FEVER (D.F.)/ DENGUE HAEMORRHAGIC FEVER (D.H.F.)

During the 3<sup>rd</sup> Quarter 2011, 9368 cases of DF/DHF and 58 deaths were reported (0.62% CFR) when compared to 7209 cases of DF/DHF and 49 deaths (CFR 0.68%) reported during the 2<sup>nd</sup> Quarter 2011. Proportion of cases notified in July, August, and September was 51.24%, 22.48%, and 26.09% respectively.

Table 09 shows the distribution of DF/DHF cases and deaths in the RDHS divisions during the 3<sup>rd</sup> quarter.

Special surveillance data on 1679 clinically confirmed cases were received and analyzed for the  $3^{rd}$  quarter 2011. Age distribution of reported cases were < 5 years of age in 145 (8.64%), 5 - 9 years of age in 228 (13.58%), 10 - 14 years of age in 179 (10.66%), 15 - 19 years of age in 164 (9.77%), 20 - 24 years of age in 237 (14.12%),25 - 29 years of age in 182 (10.84%), 30 - 34 years of age in 133 (7.92%), 35 - 39 years of age in 105 (6.25%), 40-44 years of age in 71 (4.23%), 45– 49 years of age in 70 (4.17%), 50– 59 years of age in 45 (2.68%), 60</p>

Table 09

### MORBIDITY AND MORTALITY DUE TO DF/DHF - 3RD QUARTER 2011

RDHS Division	Cases	Percentage (%)	Deaths
Colombo	3772	40.26%	33
Gampaha	1706	18.21%	10
Kalutara	388	4.14%	2
Kandy	568	6.06%	4
Matale	117	1.25%	0
N' Eliya	91	0.97%	0
Galle	364	3.89%	1
Hambantota	88	0.94%	0
Matara	173	1.85%	1
Jaffna	114	1.22%	2
Kilinochchi	16	0.17%	0
Mannar	3	0.03%	0
Vavuniya	13	0.14%	0
Mulativu	1	0.01%	0
Batticaloa	109	1.16%	1
Ampara	55	0.59%	0
Trincomalee	37	0.39%	0
Kurunagale	346	3.69%	0
Puttalam	116	1.24%	1
A'pura	86	0.92%	0
Polonnaruwa	77	0.82%	0
Badulla	301	3.21%	0
Moneragala	83	0.89%	0
Ratnapura	356	3.80%	1
Kegalle	378	4.04%	2
Kalmunai	10	0.11%	0
Total	9368	100.00%	58

According to the clinical findings majority of the reported cases (87.43%) were classified as dengue fever.12.27% were classified as DHF with 6.91%, 2.74%, 2.38%, 0.24% falling into DHF I, DHF III, DHF IV categories respectively.

Results of entomological surveillance carried out in the Western Province by the Department of Entomology, MRI during the current quarter is given in Table 10.

During the 3<sup>rd</sup> Quarter 2011, 1284 blood samples were tested using IgM capture ELISA test and Haem Agglutination Inhibition test (HAI) at the Department of Virology, MRI. From the total 845 (65.81%) samples were confirmed as positive (Table 11).

Table 10

### RESULTS OF LARVAL SURVEY CARRIED OUT BY DEPARTMENT OF ENTOMOLOGY, MRI 3RD QUARTER 2011

	Ju	ly 2011	Aug	just 2011	Sep	otember 2011	
Area	Brete	Breteau index		Breteau index		Breteau index	
	Ae. aegypti	Ae. albopictus	Ae. aegypti	Ae. albopictus	Ae. aegypti	Ae. albopictus	
	1.3	1.3	1.0	3.5			
Maharagama	1.14	1.7	1.0	0.5	3.0	2.0	
Kaduwela	00	14	0.66	8.0	00	6.6	
Moratuwa	1.5	0.4	3.5	00	3.0	5.0	
Piliyandala	0.5	4.0	00	9.9	00	14	
Ragama	00	0.98	1.5	3.0	4.0	1.0	
Wattala	0.42	3.0	00	5.8	0.5	6.9	
Minuwangoda	1.2	4.2	2.7	5.3	2.0	6.5	
Seeduwa	0.57	5.7	0.5	5.5	0.5	2.0	
Mahara	0.97	0.97	00	6.25	00	12.4	
Ja Ela	1.2	1.8	9.3	2.1	3.9	8.7	
Kelaniya	1.6	0.77	00	10.2	0.46	5.1	

Table 11

#### DHF STATISTICS FROM DEPARTMENT OF VIROLOGY, MRI 3RD QUARTER 2011

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
July	549	404
August	390	236
September	345	205
Total	1284	845

#### 13. RUBELLA

During the whole quarter 148 suspected cases were reported and 143 of them were compatible with surveillance case definition during field investigations carried out by the Medical Officer of Health. Comparing the compatible quarter in the previous year (2010) 4 cases of suspected Rubella were reported and 2 of them were compatible with the surveillance case definition.

Six Rubella disease outbreaks were reported during this quarter from the districts of Galle, (Military camp, Boossa), Badulla (Military camp Haputale), Gampaha (BOI company, Seeduwa), Colombo (Hotel staff of JAIC Hilton and Anuradhapura (Military camps Madawachchiya and Poonewa). All 6 outbreaks were Epidemiologically and laboratory investigated. The total number of outbreak cases were 141 giving the proportion of 98% of the clinically confirmed cases in all 6 outbreaks.

Out of the 143 clinically confirmed cases, 129 special investigation reports were received at the Epidemiology Unit with the special investigation rate of 90%. Out of these specially investigated cases 124 were identified as compatible with the clinical surveillance case definition of Rubella disease which is "fever and maculopapuler rash, with arthralgia/arthritis, lymphadenopathy (suboccipital, post auricular and cervical) or conjunctivitis". Selected characteristics of these confirmed cases are given in the table 12.

Table12 Selected characteristics of confirmed cases of Rubella -3<sup>rd</sup> quarter 2011 (n=124)

Sex	Male	121
	Female	3
Age group	<9 year	3
	10-19 years	24
	20-29 years	87
	30-39 years	9
	>40 years	1
Immunization status	Non immu- nized	54
	Immunized	20*
	Unknown	50

<sup>\*</sup>Of the number expressed received the vaccination, some were uncertain with aTd or Rubella vaccine due to unavailability of vaccination records

Laboratory investigations of fever and rash patients suspected of Measles/Rubella (96) were tested for Rubella IgM, by sending 3ml blood samples, collected within 3<sup>rd</sup> to 28<sup>th</sup> day of the onset of rash to Virology Laboratory at Medical Research Institute (MRI) and 56 cases were identified positive for Rubella IgM antibodies. 41% of non measles/rubella rate was identified among fever and rash patients suspected of Measles and Rubella. No Congenital Rubella syndrome cases were reported during the third Quarter 2011.

#### 14. SURVEILLANCE REPORT ON AEFI **3RD QUARTER 2011**

Surveillance of Adverse Events Following Immunization (AEFI) has effectively continued in the 3<sup>rd</sup> Quarter of 2011 has reached 98.6% of completeness of reports, while 57.3% reports were received in time at the Epidemiology Unit indicating good compliance for the system by the MOOH. Colombo, Kalutara, Matale, Hambantota, Matara, Jaffna, Kilinochchi, Mannar, Vavuniya, Mullativu, Batticaloa, Kurunegala, Puttalam, Anuradhapura, Polonnaruwa, Badulla, Monaragala, Kegalle, Kalmunai were able to send all the reports, for Sri Lanka the completeness ( the total number of monthly reports to be sent during a given time period) of reporting was 98.6%. The completeness for Rathnapura (98.1%), Gampaha (97.8%), Galle (96.5%), Ampara (95.2%), Nuwara Eliya (94.9%), Kandy (94.4%) and Trincomalee (90.9%) need to be improved further. Best timeliness was reported from Hambantota district (86.1%) followed by Kegalle (84.8%). (Table 13)

Highest percentage of nil reports were received from Mannar, (100%), Vavuniya district (100%) and followed by Ampara district (85%) which is much higher than the Sri Lanka average (49.3%) indicating the need for more attention for surveillance. The lowest percentage (6.3%) of such returns was received was from the Badulla district and followed by Puttala and Kegalle district (15.2%). High nil reports suggest possible underreporting in the districts.

Highest rate (674.4 per 100,000 immunizations) of AEFI was reported from Mullativu district with the number of 43 AEFI. The highest number (414) and rate of AEFI (501.2 per 100,000 doses administrated) were reported against DPT vaccine followed by Pentavalent 1<sup>st</sup> dose vaccine (291.3 per 100,000 doses administrated). High Fever (419), Allergic Reaction (327), Nodule (120) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (211 cases: 84.3 per 100,000 doses administered) and DPT (133 cases: 161.01 per 100,000 doses administered) vaccines. For Allergic Reactions, it was largely due to DPT (71 cases: 85.95 per 100,000 doses administered), MR (73 cases: 84.84 per 100.000 doses administered) and Pentavalent (78 cases: 31.16 per 100,000 doses administered).

(Table 14)

Table 13 COMPLETENESS AND TIMELINESS OF MONTHLY REPORTING AND RECEIPT OF "NIL" REPORTS OF AEFI BY RDHS DIVISIONS - 3RD QUARTER 2011

					AEFI Rate
	%	%	%	No. of AEFI	(100,000 vaccine
DPDHS	completeness	Timely Returns	Nil Returns		doses)
Colombo	100.0	52.4	33.3	81	66.6
Gampaha	97.8	68.2	20.5	112	87.2
Kalutara	100.0	33.3	47.2	39	53.9
Kandy	94.4	51.5	39.7	90	108.5
Matale	100.0	61.1	58.3	35	100.5
Nuwara Eliya	94.9	43.2	78.4	9	18.2
Galle	96.5	30.9	65.5	33	48.9
Hambantota	100.0	86.1	16.7	102	235.3
Matara	100.0	64.7	56.9	36	66.8
Jaffna	100.0	75.8	51.5	124	342.8
Kilinochchi	100.0	66.7	91.7	1	12.7
Mannar	100.0	53.3	100.0	0	0.0
Vavuniya	100.0	91.7	100.0	0	0.0
Mullativu	100.0	16.7	50.0	43	674.4
Batticaloa	100.0	50.0	76.2	22	55.6
Ampara	95.2	30.0	85.0	3	15.5
Trincomalee	90.9	46.7	80.0	8	24.7
Kurunegala	100.0	55.1	44.9	102	92.5
Puttalam	100.0	51.5	15.2	54	92.2
Anuradhapura	100.0	70.2	40.4	67	97.7
Polonnaruwa	100.0	81.0	33.3	28	96.6
Badulla	100.0	81.3	6.3	138	248.0
Moneragala	100.0	81.8	63.6	31	87.5
Ratnapura	98.1	30.2	58.5	45	61.8
Kegalle	100.0	84.8	15.2	56	111.3
Kalmunai	100.0	48.7	74.4	11	33.5
Sri Lanka	98.6	57.3	49.3	1270	95.6

Table 14

NUMBER AND RATE OF SELECTED AEFI REPORTED BY VACCINE AND BY TYPE OF AEFI, 3rd Quarter 2011

Vaccine	Seizure	Allergic Reaction	Injection Site Abscess	Severe Local Reactions	High Fever	Lyphadentis	H	Nodule	Arthralgia	Encephalopathy	AnaphylacticShock	Meningitis	Persistent Screaming	Others	Total	Rate/ 100,000 dosed
BCG	0	0	2	0	0	3	0	0	0	0	0	0	0	0	5	5.8
DPT	42	71	12	26	133	0	0	53	0	0	0	0	3	74	414	501.2
Penta 1st	9	40	9	9	124	0	0	30	1	0	0	1	12	24	259	291.3
Penta 2nd	2	22	5	5	42	0	0	18	0	0	0	0	7	11	112	134.1
Penta 3rd	2	16	0	6	45	0	1	10	0	1	0	0	3	13	97	124.5
OPV	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.2
Measels	3	24	2	2	20	0	0	0	0	0	0	0	0	6	57	64.6
DT	2	21	2	9	20	0	0	8	0	0	0	0	0	23	85	95.3
TT	0	5	1	1	1	0	0	0	1	0	0	0	0	3	12	14.8
JE	7	47	0	1	16	0	0	1	0	0	0	0	0	2	74	109.2
aTd	0	7	0	0	2	0	0	0	0	0	0	0	0	32	41	60.4
MR	0	73	1	9	16	0	0	0	0	0	4	0	0	8	111	129.0
Total	67	326	34	68	419	3	1	120	2	1	4	1	25	197	1268	95.6

#### 15. **TUBERCULOSIS**

A total of 2399 Tuberculosis patients were registered for 3rd Quarter 2011 by the National Programme for Tuberculosis Control and Chest Diseases. Of this total 1739 patients had pulmonary TB and 660 patients were with extra pulmonary TB. Of these patients, 1152 (66.24%) were sputum smear positive. The distribution of tuberculosis patients by RDHS division is given in Table 15.

Table 15 TUBERCULOSIS PATIENTS BY RDHS DIVISIONS -3rd Quarter 2011

RDHS				NEGA-		РТВ
DIVISION	PTB	EPTB	TOTAL	TIVE	POSITIVE	SS+VE(%)
Colombo	381	142	523	82	299	78.48
Gampaha	199	61	260	57	142	71.36
Kalutara	95	50	145	16	79	83.16
Kandy	137	44	181	77	60	43.80
Matale	40	16	56	18	22	55.00
Nuwara Eliya	41	25	66	17	24	58.54
Galle	61	15	76	24	37	60.66
Matara	26	11	37	7	19	73.08
Hambantota	21	9	30	5	16	76.19
Jaffna	56	23	79	27	29	51.79
Mannar	8	5	13	2	6	75.00
Vavuniya	18	3	21	6	12	66.67
Mulathiv	4	0	4	0	4	100.00
Kilinochchi	7	3	10	2	5	71.43
Trincomalee	70	11	81	57	13	18.57
Batticaloa	30	16	46	2	28	93.33
Ampara	10	6	16	6	4	40.00
Kurunegala	136	53	189	83	53	38.97
Puttalam	43	26	69	3	40	93.02
Anuradhapura	45	25	70	18	27	60.00
Polonnaruwa	35	16	51	8	27	77.14
Badulla	43	15	58	9	34	79.07
Moneragala	11	5	16	1	10	90.91
Rathnapura	104	42	146	17	87	83.65
Kegalle	72	28	100	18	54	75.00
Kalmunai	46	10	56	25	21	45.65
Total	1739	660	2399	587	1152	66.24

PTB-Pulmonary Tuberculosis EPTB- Extra Pulmonary Tuberculosis44

SP + ve - Sputum Positive SP - ve - Sputum Negative Data from Central TB Register

Source - National TB Register

#### 16. SURVEILLANCE AT SEA PORT

Details of the vaccinations carried out by the Assistant Port Health Office during the 3rd guarter 2011, is as follows;

		Total
a.	Yellow fever	1331
.b	Meningococcal meningitis	101

#### 17. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the Inter national Airport, Katunayake during the 3rd Quarter 2011 is given below.

#### 1. Yellow Fever Surveillance

a. No.	with valid	d certif	icate		-	04
	without orted	valid	certificate	&	-	00
c. No.		valid	certificate	&	-	00

2. Airport Sanitation		
<ul> <li>a. No. of sanitary inspections car- ried out including food establish- ments</li> </ul>	-	29
b. No. of food sample taken under food act	-	00
c. No. found defective	-	00
d. No. of court cases/prosecuted/ warned	-	00

#### 3 Release of Human Remains

а	No. of leased	Human	Remains	re-	-	125
b	No .of post mo		to J.M.O.	for	_	05
С	No. of a	alleged sui	cide		-	03

#### 4 Other Health activities

<sup>a</sup> Polio	Vaccination	No	of	doses	-	00
given						

### 18. LEPROSY

#### QUARTERLY RETURN OF LEPROSY STATISTICS - 3RD QUARTER 2011

Table 16

#### 1. National

	At the	end of the qua	arter	Cumulative for end of the quarter			
	3rd QTR, 2011	3rd QTR, 2010	Diff. (%)	2011	2010	Diff. (%)	
New patients detected	603	544	10.84	1730	1572	10.05	
Children	61	54	12.96	167	153	9.1	
Grade 2 Deformities	46	36	27.77	119	104	14.42	
Multi-Bacillary	296	252	17.46	843	725	16.27	
Females	249	246	1.21	729	692	5.34	

#### 2. Districts

District	New patients	Deformities	Children	MB	Females
Central	16	3	1	11	7
Kandy	8	2	0	6	1
Matale	3	0	1	2	1
NuwaraEliya	5	1	0	3	5
Eastern	84	10	14	38	28
Ampara	18	2	1	12	6
Batticaloa	43	8	8	18	13
Kalmunai	11	0	2	5	5
Trincomalee	12	0	3	3	4
Northern	9	1	0	3	4
Jaffna	7	1	0	3	2
Killinochchi	1	0	0	0	1
Mulathivu	1	0	0	0	1
North Central	41	2	6	20	16
Anuradhapura	19	1	3	9	7
Pollonnaruwa	22	1	3	11	9
North Western	63	9	4	34	19
Kurunegala	40	7	2	25	10
Puttalam	23	2	2	9	9
Sabaragamuwa	36	2	1	20	17
Kegalle	10	2	0	5	2
Rathnapura	26	0	1	15	15
Southern	54	2	2	35	24
Galle	6	0	0	4	1
Hambanthota	31	1	2	22	16
Matara	17	1	0	9	7
Uva	10	1	2	6	1
Baddulla	6	0	1	4	1
Monaragala	4	1	1	2	0
Western	290	16	31	129	133
Colombo	120	6	15	58	51
Gampaha	89	3	7	40	43
kaluthara	81	7	9	31	39
Sri Lanka	603	46	61	296	249

Source : Anti Leprosy Campaign

#### SEXUALLY TRANSMITTED DISEASES 19.

Table 17 NEW EPISODES OF STD/HIV/AIDS REPORTED OR TREATED AT STD CLINICS IN SRI LANKA **3RD QUARTER 2011** 

Disease		ses or new s during the		Total new cases or new episodes for th calendar year up to end of the quarter **		
	Male	Female	Total	Male	Female	Total
HIV positives <sup>1</sup>	20	22	42	59	53	112
AIDS	4	1	5	16	6	22
Early Syphilis <sup>2</sup>	41	13	54	116	45	161
Syphilis Late Syphilis <sup>3</sup>	95	77	172	225	173	398
Congenital Syphilis <sup>4</sup>	2	0	2	6	2	8
Gonorrhoea <sup>5</sup>	50	35	85	128	72	200
Ophthalmia Neonatorum <sup>6</sup>	2	1	3	2	1	3
Non specific cervicitis/urethritis	170	323	493	439	845	1284
Chlamydial Infection	0	0	0	0	0	0
Genital Herpes	347	369	716	916	1125	2041
Genital Warts	258	179	437	655	458	1113
Chancroid	0	1	1	0	1	1
Trichomoniasis	4	19	23	11	66	77
Candidiasis	263	404	667	753	1176	1929
Bacterial Vaginosis	0	259	259	0	768	768
Other sexually transmitted diseases <sup>7</sup>	102	67	169	395	211	606

<sup>-</sup> Central STD clinic Colombo and peripheral STD clinics of National STD/AIDS Control Programme of Sri

<sup>-</sup> Includes adjustments for revised diagnosis, reporting delays or any other amendments

<sup>-</sup> Includes AIDS cases

<sup>2</sup> - Diagnosed within 2 years of infection and considered to be infectious

<sup>3</sup> - Diagnosed after 2 years of infection and considered to be non-infectious

<sup>-</sup> Includes both early and late cases

<sup>-</sup> Includes presumptive Gonorrhoea

<sup>-</sup> Includes both gonococcal and chlamydial conjunctivitis in neonatal period

Includes Lympho granuloma venerium, Granuloma inguinalae, Molluscum contagiosum, Scabies, Tinea, Hepatitis B etc.

### 20. BACTERIOLOGY REPORT -3rd QUARTER 2011 -MEDICAL RESEARCH INSTITUTE

Table 18

	JULY	AUG	SEP
(A) CHOLERA			
No. of stool specimens Examined	106	133	155
El Tor Cholera	-	-	_
Ogawa			
Inaba	-	-	
Cholera 0139	-	-	
(B) SALMONELLA			
Blood- No. Examined	49	53	70
S.typhi	1	-	1
S.paratyphi A	1	1	1
Stools—No. examined	197	182	174
S.typhi	-	-	-
S.paratyphi A	-	-	
Others	3	2	
(C) SHIGELLA			
No. Examined	197	182	174
Sh.flexneri 1	1	-	
Sh.flexneri 2	-	1	-
Sh.flexneri 3	-		
Sh.flexneri 4	-	-	-
Sh.flexneri 5			
Sh.flexneri 6	-		
Sh. sonnei	3		
(D) ENTEROPATHO- GENIC E.COLI			
No.Examined	2	1	1
No.+ve	-	-	_
(E) CAMPYLOBACTER			
No.Examined	124	39	23
No. Positive	-	-	
(F) SPECIAL TESTS	53	44	51
Clinical	30	39	48
S. Typhi	1	-	4
S. Paratyphi A	14	11	23
Other Salmonella	2	-	2
Shigella spp	1		

### 21. SURVEILLANCE OF MENINGITIS— 3rd quarter 2011

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 3<sup>rd</sup> quarter 2011, 232 cases of suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this 175 cases were clinically confirmed by the Public Health Inspectors during their field investigations. Highest number of meningitis cases were reported from the Gampaha district (32), followed by Kegalle (29) and Kurunegala (26) districts.

Thirty seven percent of the clinically confirmed meningitis cases belonged to the age group less than one year, another 15% belonged to the age group 1-4 years and 21% belonged to age group 5 – 14 years. Sixty percent of the clinically confirmed cases were males and 40% were females.

Table 19
Summary findings for special investigations carried out for clinically confirmed cases of Meningitis up to 3rd Quater 2011

CSF Culture Report		
CSF Culture	Number	(%)
CSF results available	136	46%
No Growth	(118)	
Group B streptococci	(08)	
Haemophillus influenza	(03)	
Meningococal	(03)	
Streptococus pneumonia	(02)	
• TB	(01)	
Culture results not known	156	52%
Not done	05	02%
Total	297	100%
Final outcome of the patient		
Outcome	Number	(%)
Cured	267	90%
Died	10	03%
Information not available	20	07%
Total	297	100%
Final Diagnosis(based on clinical and la	ab findings)	
Diagnosis	Number	(%)
Culture confirmed	19	06%
Probable bacterial meningitis	27	09%
Probable viral meningitis	23	08%
Suspected Meningitis	228	77%
Total	297	100%

#### 22 INFLUENZA SURVEILLANCE

Pandemic/Avian Influenza preparedness activities began in the country in 2005 following global Avian/Pandemic preparedness programme. As part of these activities influenza surveillance in animals and humans were initiated by the Department of Animal Production and Health (DAPH) of Ministry of Livestock Development and Epidemiology Unit of Ministry of Health respectively. These activities are supervised by the National Technical Committee for Avian/Pandemic Influenza Preparedness. This report summarizes progress of influenza surveillance activities for the 3<sup>rd</sup> quarter 2011, July to September.

#### Human Influenza surveillance ILI Surveillance –Laboratory Component

Under ILI laboratory surveillance a total of 510 samples were received from hospitals identified as sentinel surveillance sites for Avian/Pandemic Influenza for the said quarter. There were 94 samples in July, 173 in August and 243 in September. Lady Ridgeway Children's Hospital (LRH) sent in the highest number of samples (67) with Teaching Hospital Kurunegala sending in 65 and Teaching Hospital (TH) Peradeniya 62 samples. Only National Hospital of Sri Lanka (NHSL), GH Ampara and Sri Jayawardanepura General Hospital (SJGH) failed to send any samples within the quarter. There were 34 samples from GH Vavuniya, 22 from TH Batticoloa and 3 from TH Jaffna. Table 20 below shows the performance of sentinel hospitals in the laboratory component of the surveillance programme for this quarter.

These samples were processed in the Medical Research Institute (MRI) which is the National Influenza Centre (NIC) for the country. Influenza B remained as the predominant influenza viral strain during the quarter with 5, 7 and 13 cases being positive in the months of July, August and September. Since the second wave of the H1N1 pandemic has subsided by end of the 1<sup>st</sup> quarter, there were only 3 cases in this quarter. Four cases of Influenza A (H3N2) was also recorded. Both Influenza B and Influenza A (H3N2) were being reported as seasonal influenza strains globally during this time which was reflected in the local circulating viral pattern.

# ILI Surveillance – Epidemiological Component

In the sentinel hospitals ILI patients are diagnosed by the medical officers of the Out Patients' Departments (OPD) on the surveillance case definitions adopted. ICNO would collect information on the number of total OPD attendees and the number with ILI at the end of each day and would consolidate this information into a weekly return that is sent to the Epidemiology Unit.

In July 2011 there were 2402 ILI cases visiting OPD of sentinel hospitals and 2555 in August and 5415 in September.

The following graph in figure 1 shows the distribution of ILI attendance in OPD by month 2008-2011. In 2009 the country suffered from the Influenza A H1N1 pandemic and in 2010 its second wave was reported which ended by the beginning of 2011. Both 2008 and 2011 were non-pandemic years.

Although ILI data may be underestimated as only some of the sentinel hospitals had sent in these data, the trend of disease activity can be clearly observed over the years.

The trend for 2008 shows the two influenza peaks within a year with very low influenza activity in between. The first peak occurs in the warmer months from April to June and the second peak occurs towards the end of the year during the colder months of November - January. This trend was seen distorted in 2009 where only a large first peak was seen. ILI surveillance was totally disrupted during the pandemic period which began in October and therefore the second larger peak was not evident. In 2010 special measures were taken to sustain the OPD ILI surveillance during the second pandemic wave and a second much higher peak was seen in addition to the smaller first peak. The trend in 2011 corresponded with the expected flu' pattern in the country showing clearly the two peaks within the year.

### Severe Acute Respiratory Infections (SARI) Surveillance

SARI surveillance was initially established in 3 hospitals in the country; Lady Ridgeway Children's Hospital (LRH), Colombo South Teaching Hospital (CSTH) and Teaching Hospital Peradeniya. By end of the 1<sup>st</sup> quarter, GH Matara replaced CSTH as a SARI surveillance site. These hospitals are expected send in up to 20 respiratory samples per month from inward patients admitted with severe acute respiratory tract infections. For the epidemiology component of this activity ICNO with the help of surveillance officers of the programme stationed within these hospitals, would collect the information on the number of total inward patients in relevant wards and the number with SARI, daily and consolidate this information into a weekly return that is sent to the Epidemiology Unit

#### SARI Surveillance – Lab surveillance

There were a total of 201 samples from SARI patients in above 3 hospitals received by the MRI for the 3<sup>rd</sup> quarter 2011. July and September each recorded a high number of samples (73). In August there were 55 samples. For the whole quarter LRH had sent in the highest number of samples (99) with 61 from GH Matara and 41 from TH Peradeniya. Table 22 below shows the performance of 3 SARI sentinel hospitals. Along with ILI samples, these SARI samples are processed at the NIC, MRI. Similar to the pattern seen in ILI results, Influenza B was seen predominantly among inward SARI patients while the presence of Pandemic Influenza A(H1N1) was also observed throughout although in small numbers towards the end of the guarter. There was 1 Influenza A H3N2 case in September which marked the beginning of its increasing trend. Table 23 below shows the results yielded for SARI samples in the 3<sup>rd</sup> guarter 2011 at NIC.

#### SARI Surveillance – Epidemiological surveillance

There were total of 595 patients treated inward for severe respiratory tract infections in the said 3 hospitals within the 3<sup>rd</sup> quarter. The highest number (259) was reported from LRH and TH Peradeniya had treated 182 and GH Matara 154 patients. The highest number of patients was reported in July (223) and August and September had 182 and 190 cases respectively. Table 23 below shows the distribution of SARI patients in the 3 hospitals by month in the 3<sup>rd</sup> quarter 2011.

#### **Animal Influenza Surveillance**

This is carried out by the Department of Animal Production and Health (DAPH) of the Ministry of Livestock Development who is the partner of the Ministry of Health in Avian/Pandemic Preparedness activities. Under routine animal influenza surveillance, pooled and serum samples are collected randomly from backyard farms, industrial farms and hot spots for migratory birds. These also include identified special targets such as wet markets, processing plants, parent stocks, pet birds and ducks. Any unusual bird deaths or disease outbreaks are also investigated. Sampling is mainly carried out by the Veterinary Investigation Officers (VIO). These samples are tested for Highly Pathogenic Avian Influenza (HPAI) viral strains at their laboratory, Veterinary Research Laboratory (VRI).

In the 3<sup>rd</sup> quarter 2011 there were 775 pooled samples and 3384 serum samples collected and tested at the VRI for HPAI. None of the samples had yielded HPAI. The following table 25 shows the number of samples collected by month and the districts they were collected from.

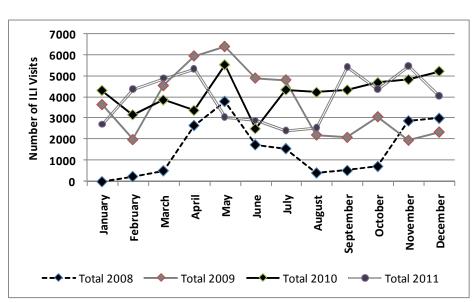


Figure 1: Distribution of OPD ILI visits by month - 2008 - 2011

Table 20: performance of sentinel hospitals in the laboratory component of the surveillance programme - 3rd Quarter 2011

Institution	July	Aug	Sep	Total	
LRH	20	22	25	67	
NHSL	0	0	0	0	
СЅТН	0	1	0	1	
IDH	0	0	6	6	
SJGH	0	0	0	0	
NCTH	1	8	11	20	
TH Peradeniya	20	16	26	62	
GH Nuwara Eliya	6	10	12	28	
TH Karapitiya	16	9	15	40	
GH Matara	0	7	12	19	
TH Jaffna	0	0	3	3	
GH Vavuniya	0	16	18	34	
GH Ampara	0	0	0	0	
TH Batticaloa	1	6	15	22	
TH Kurunegala	14	28	23	65	
GH Chilaw	0	5	17	22	
TH Anuradhapura	7	18	16	41	
GH Polonnaruwa	0	9	5	14	
GH Badulla	0	6	18	24	
GH Ratnapura	9	12	21	42	
Total	94	173	243	510	

Table 21: Types of Respiratory Viruses Isolated in ILI samples – 3rd Quarter 2011

MONTH	TOTAL	INFLU B	PA(H1N1)	H3N2	A UNTYPED
July	94	5	2	0	0
Aug	173	7	0	1	1
Sep	243	13	1	3	4
Total	510	25	3	4	5

Table 22: performance of sentinel hospitals in the laboratory component of the SARI surveillance - 3rd Quarter 2011

Institution	July	Aug	Sep	Total		
LRH	36	35	28	99		
GH Matara	23	18	20	61		
TH Peradeniya	14	2	25	41		
Total	73	55	73	201		

Table 23: Types of Respiratory Viruses Isolated in SARI Samples - 3rd Quarter 2011

MONTH	TO- TAL	INFLU B	PA(H1N1)	H3N2
July	73	4	12	0
Aug	55	3	1	0
Sep	73	15	2	1
Total	201	22	15	1

Table 24: Distribution of SARI patients by month – 3rd Quarter 2011

Institution	July	Aug	Sep	Total
LRH	109	82	68	259
GH Matara	60	50	44	154
TH Peradeniya	54	50	78	154
Total	223	182	190	595

Table 25: Animal samples collected by month and district – 3rd Quarter 2011

aistiiot	district ord educater 2011									
	No. of s	samples								
Month	Pooled	Serum	Districts samples were collected from							
July	176	529	Gampaha, Colombo, Rat- napura, Anuradhapura, Kandy, Badulla, Trinco- malee, Matale, Nuwara Eliya, Ampara							
August	304	1435	Gampaha, Colombo, Putta- lam, Kurunegala, Polonna- ruwa, Ratnapura, Kandy, Badulla, Trincomalee, Matale, Matara, Ampara							
Sep- tember	295	1420	Gampaha, Colombo, Putta- lam, Hambantota, Nuwara Eliya, Jaffna, Anuradhapura, Polonnaruwa, Ratnapura, Kandy, Badulla, Trinco- malee, Matale, Kegalle							
Total	775	3384								

#### SURVEILLANCE REPORT ON DENGUE FEVER/ DENGUE HAEMORRHAGIC FEVER -2010

Dengue Fever was serologically confirmed in Sri Lanka in 1962 and the first outbreak was reported in 1965. The disease which was earlier confined to urban areas has spread to peri urban and rural districts as well. At present it is endemic in the country and epidemics have been experienced almost every other year since 2002 (Figure 2- Dengue cases and deaths notified during 1992 – 2010).

During the year 2010, 34105 suspected Dengue Fever /Dengue Haemorrhagic Fever cases and 246 deaths (CFR 0.72 %) were reported to the Epidemiology Unit. When compared to 2009, the case fatality rate has reduced (in 2009, 35,010 cases and 346 deaths with a CFR of 0.99%). The incidence rate for DF/DHF in 2010 was 165.27 per 100,000 population.

The usual seasonal increase in case reporting which occurs in June-July in relation to the South Western monsoon rains was well marked in 2010. This was not marked until 2009 after 2004, but, a level of high endemicity prevailed throughout the period since 2005.

The cases of DF/DHF were distributed in almost all the districts but the majority of the cases were reported from the Western Province which accounted for 34.34% of the total case load. Jaffna, Ratnapura, Kandy districts reported a high case load accounting for 8.82%, 8.3% and 4.82% of the total case load respectively. Distribution of cases by RDHS divisions is given in Table 26.

Fifteen districts and 65 'high-risk' MOH areas reported a significant number of cases during the year 2010. Colombo Municipal Council area reported 1924 cases (5.63% of the total case load) followed by the MOH areas Dehiwala (1062 cases i.e. 3.11%), MC Jaffna (645 cases i.e. 1.89%), Vavuniya (505 cases i.e. 1.48%).

#### Special Surveillance of DF/DHF

Special surveillance data was received from Infection Control Nursing Officers in health institutions where dengue patients were treated. Lady Ridgway Hospital for Children, Teaching Hospital Peradeniya, National Hospital of Sri Lanka and Teaching Hospital Batticaloa provided a major proportion of special surveillance data. Several leading private hospitals in the Colombo district also significantly contributed to the surveillance data

Special surveillance data in respect of 8180 cases were received for the year 2010. All age groups were affected by the disease with 27.8% of the cases (2274) being less than 15 years old while 12.97% of the cases (1061) were in the 20-24 year age group (Figure3). Deaths due to DF/DHF had occurred among all age. The highest case fatality rate was for those below 1year of age followed by over 60 years group. The highest number of deaths was among the 05-09 year age group (Figure 4).

Distribution of cases and deaths by sex showed that there was a female preponderance

(Figure 5).

#### Severity of the diseases

According to the WHO disease classification 6458 cases (78.05%) received through the special surveillance mechanism were classified as dengue fever while the remaining 1713 cases (21.05%) were classified as DHF. Majority of the DHF cases were classified as DHF I (871 cases i.e. 50.85%), followed by DHF II (502 cases i.e 29.31%). Out of the DHF cases 19.85% (340) had developed Dengue shock (DHF III & IV)

#### Confirmation of the diagnosis

Department of Virology, Medical Research Institute, Colombo had tested 5441 samples during the year using IgM capture ELISA test and Haem Agglutination Inhibition test and 3409 were serologically confirmed

#### **Prevention & Control**

The control strategy adopted in 2005 to closely monitor the high risk areas was continued during 2010.

The Epidemiology Unit carried out surveillance and rapid response activities and the National Dengue Coordination Unit (NDCU) supervised the implementation of prevention and control activities including monitoring at district level. Dengue control activities were reviewed at national and district levels by NDCU in collaboration with the Epidemiology Unit.

Figure 2

DENGUE CASES AND DEATHS NOTIFIED DURING 1992 - 2010

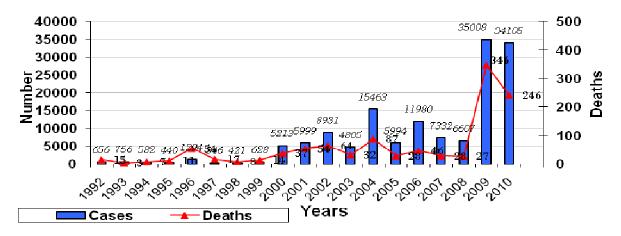


Figure 3 - Distribution of Confirmed DF/DHF Cases by Age group- 2010

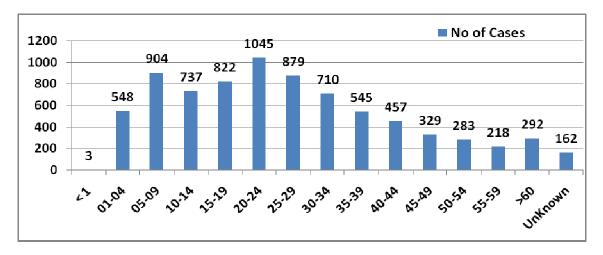


Figure 4- Distribution of Deaths due to DF/DHF and case fatality rates by Age groups - 2010

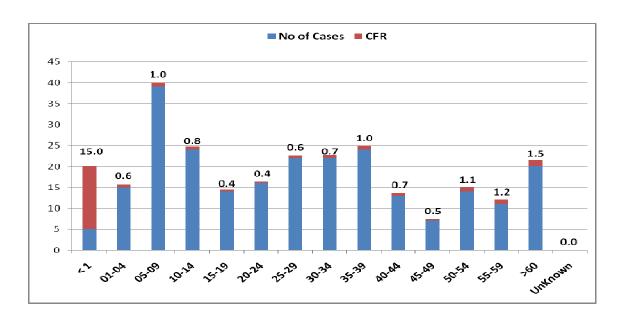
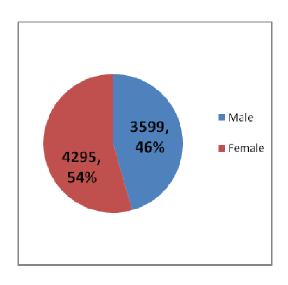


Table 26- **DISTRIBUTION OF NOTIFIED CASES AND DEATHS DUE TO DF/DHF BY RDHS DIVISION-2010** 

**RDHS Divi-**No of % Inci-No **CFR** sion cases dence of-% **Deaths** Rate (per 100'000 population) Colombo 5942 17.42 0.96 235.60 57 Gampaha 3957 11.60 160.75 34 0.86 Kalutara 5.31 0.83 1,812 153.21 15 Kandy 1,644 4.82 118.58 8 0.49 Matale 650 1.91 133.67 3 0.46 Nuwara 225 0.66 30.10 1 0.44 Eliya Galle 102.93 1,112 3.26 13 1.17 Hamban-809 2.37 140.10 4 0.49 tota Matara 614 1.80 74.89 0.98 6 Jaffna 3,007 8.82 481.39 30 1.00 Killi-0.00 53 0.16 166.86 0 nochchi Mannar 568 1.67 594.88 5 0.88 1.70 0.35 Vavuniya 579 192.08 2 Mulativu 0.07 0.00 23 0 **Batticaloa** 1,248 3.66 213.33 12 0.96 **Ampara** 168 0.49 0 0.00 Trinco-987 2.89 239.30 10 1.01 malee Kurunegala 1,428 4.19 90.75 3 0.21 **Puttalum** 1,059 3.11 127.99 7 0.66 Anurad-0.45 1,104 3.24 134.31 5 hapura Polonna-402 1.18 101.25 0 0.00 ruwa **Badulla** 1,335 3.91 158.50 0.52 7 Monaragala 1,071 3.14 229.47 0.09 1 Ratnapura 2,830 8.30 252.99 14 0.49 Kegalle 918 2.69 111.15 3 0.33 Kalmunai 560 1.64 125.14 6 1.07 **National** 34,105 100.00 165.27 246 0.72

Figure 5
DISTRIBUTION OF CONFIRMED CASES AND
DEATHS BY SEX – 2010

#### Cases



#### **Deaths**

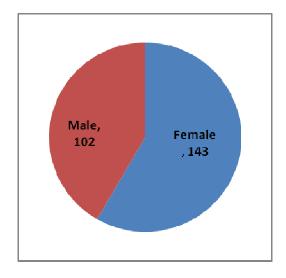


Table 27

Volume 52

#### **SUMMARY OF NOTIFIABLE DISEASES - 3rd QUARTER 2011**

Health Region	Dysentry	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Measles	Simple Con. Fever	Tetanus	Typhus Fever	Viral Hepatitis	Whooping Cough	Dengue Fever /DHF	Rubella	Chickenpox	Mumps	Meningitis	Leishmaniasis
Colombo	51	0	128	46	0	114	14	4	1	1	28	3	3772	23	66	50	7	0
Gampaha	33	5	46	56	2	108	4	0	0	7	213	0	1706	45	35	28	32	0
Kalutara	47	2	34	3	1	127	1	1	0	3	3	6	388	0	59	38	14	0
Kandy	98	3	10	8	0	49	1	4	0	31	15	0	568	0	32	103	7	0
Matale	76	1	10	11	0	17	0	3	0	2	5	0	117	0	16	21	9	6
Nuwara-Eliya	83	1	21	0	0	18	1	0	2	15	15	0	91	0	35	57	2	0
Galle	41	1	17	1	2	87	0	6	0	19	2	0	364	12	86	111	14	1
Hambantota	30	0	2	15	1	71	0	16	0	24	7	0	88	0	5	34	4	77
Matara	33	0	6	20	0	113	1	5	1	21	5	1	173	0	64	32	6	11
Jaffna	139	0	68	37	0	0	0	1	0	11	9	0	114	0	16	38	1	0
Kilinochchi	17	0	2	2	0	0	0	0	0	3	0	0	16	0	1	1	0	0
Mannar	11	1	12	4	0	2	0	0	0	3	0	0	3	0	4	4	1	0
Vavuniya	6	2	1	9	0	9	0	0	0	0	0	2	13	1	2	1	2	0
Mullaitivu	24	0	2	5	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Batticaloa	80	1	1	15	2	7	0	0	0	1	0	1	109	0	2	17	2	0
Ampara	66	- 1	3	23	0	3	1	0	0	0	1	0	55	1	49	80	13	0
Trincomalee	115	1	8	4	0	8	0	1	-1	3	- 1	0	37	0	13	26	1	3
Kurunegala	113	5	31	32	1	109	2	8	0	21	19	3	346	0	77	123	26	11
Puttalam	58	1	9	0	1	26	0	0	2	2	1	3	116	1	13	15	10	1
Anuradhapura	38	- 1	2	9	0	6	2	1	1	0	10	2	86	26	67	32	19	111
Polonnaruwa	31	0	2	10	0	10	1	1	0	0	7	1	77	1	28	24	1	42
Badulla	159	0	10	2	0	37	4	0	0	37	31	0	301	37	48	24	7	0
Moneragala	54	0	10	3	0	14	0	2	0	19	32	1	83	0	45	43	1	0
Ratnapura	141	3	16	4	0	176	0	23	0	2	18	1	356	1	52	47	22	0
Kegalle	32	0	17	2	0	62	0	0	0	13	118	0	378	0	75	106	29	0
Kalmunai	97	0	1	51	0	1	0	1	0	0	1	0	10	0	15	68	1	0
Total	1673	29	469	372	10	1174	32	77	8	238	541	24	9368	148	906	1123	232	263

No polio cases. (from AFP surveillance system).

The Bulletin is compiled and distributed by the:

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This document is available on the internet www.epid.gov.lk.

Figures given may be subject to revision.

The editor welcomes accounts of interesting cases, outbreaks or other public health problems of current interest to health officials.

Such reports should be addressed to:

The Editor, Quarterly Epidemiological Bulletin

Epidemiology Unit, P.O. BOX 1567, Colombo, SRI LANKA.

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