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1. POLIOMYELITIS

AFP SURVEILLANCE : POLIOMYELITIS ERADICATION INITIATIVE 4th QUARTER 2010 SUMMARY

Fifteen (15) Acute Flaccid Paralysis (AFP) cases were notified to the Epidemiology Unit during the 4th quarter 2010. This compares with the 20 and 29 AFP cases each reported during the 4th quarter 2009 and 2008 respectively. The total number of reported cases at completion of the 4th quarter 2010 did not make up the expected number of AFP cases for a quarter to make up a non-polio AFP rate of 2 per every 100,000 under 15 years old according to WHO surveillance criteria. Thirty cases for a quarter or 120 AFP cases for a year are expected to achieve this rate. At completion of this year by the end of this quarter, 81 AFP cases have been reported which yielded a rate of 1.3 per 100,000 under 15 years old.

NOTIFICATION OF AFP CASES FROM HOSPITALS

The main sentinel site for AFP, Lady Ridgeway Children's Hospital (LRH), Colombo which is a tertiary care centre which receives referrals from other hospitals in the country has reported the highest number of cases [5, (33%)] for the quarter out of the 58 sentinel sites in the country. Teaching Hospital Karapitiya reported 3 cases, Teaching Hospital Kandy and TH Peradeniya had reported 2 cases (13%) each in this quarter. Colombo South Teaching Hospitals (CSTH), North Colombo Teaching Hospital (NCTH) and GH Badulla reported 1 AFP case each for the quarter. Hospitals that notified the AFP cases in the 4th quarter, 2010 are as follows.

LRH	5
TH Karapitiya	3
TH Kandy	2
GH Peradeniya	2
CSTH	1
NCTH	1
GH Badulla	1
Total	15

DISTRIBUTION OF AFP CASES ACCORDING TO PROVINCES, DISTRICTS & MOH AREAS

Western province (Kalutara and Gampaha Districts), Southern province (Galle District) and Central Province (Matale and Kandy District) reported 3 AFP cases each in the 4th quarter 2010.

Districts of Moneragala and Badulla from the Uva province, districts of Trincomalee in Eastern province, district of Kegalle in Sabaragamuwa Province, district of Kurunegala in North Western Province and district of Polonnaruwa in North Central Province reported one AFP cases each in this quarter. District of Batticaloa, Kalmunai, Mullativu, Kilinochchi and Mannar did not report any cases for the whole year. The complete list of AFP cases according to the province, district and MOH area is given below.

Table 1. GEOGRAPHICAL DISTRIBUTION of AFP CASES BY DISTRICT & MOH AREA

Province	District	MOH Area	No of AFP cases
Western	Kalutara	Bandaragama	1
		Mathugama	1
	Gampaha	Ragama	1
Southern	Galle	Udugama	2
		Akmeemana	1
	Central	Matale	Rattota
	Kandy	Thalathuoya	1
North Western	Kurunegala	Alawwa	1
North Central	Polonnaruwa	Elahera	1
Eastern	Trincomalee	Kantale	1
Uva	Moneragala	Badalkumbura	1
		Badulla	Passara
Sabaragamuwa	Kegalle	Rambukkana	1
Total			15

SEASONAL DISTRIBUTION OF AFP CASES

Six cases (40%) were reported in October and the proportion compatible with the previous year. The number reported for the month of November was 5 (33%) and December was 4 (27%).

AGE & SEX DISTRIBUTION OF AFP CASES

More than half of all AFP cases [8(53%)] reported in the 4th quarter this year were between 5-9 years of age. A different trend was observed during last year where 45% of cases were between 1-4 years of age. In 2010, 4th quarter, 2 children (13%) were below 1 year of age and 4 (27%) children were between 1-4 years and 1 (7%) child was between 10-15 years of age.

Almost three fourth of all AFP cases [11(73%)] reported in 4th quarter 2010 were boys. This compares similarly with the same quarter in 2009 where more boys (65%) than girls were reported.

The table below shows the age and sex distribution in 4th quarter 2010.

Table 2. **DISTRIBUTION OF AFP CASES BY AGE & SEX FOR 4th QUARTER 2010**

Age Group	Sex		Total
	Male	Female	
<1 year old	1	1	2
1-4 year old	3	1	4
5-9 year old	6	2	8
10-15 year old	1	0	1
Total	11	4	15

LABORATORY SURVEILLANCE OF AFP CASES

Two stool samples collected within 14 days of onset of paralysis is required at 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'.

Twelve cases out of the 15 AFP cases (80%) reported in the 4th quarter 2010 had two timely stool samples sent to MRI for polio virology. Only 2 cases reported had stool samples collected late from respective institutions. A case from TH Peradeniya had no stool samples collected.

NATIONAL POLIO EXPERT COMMITTEE

The National Polio Expert Committee consists of experts from fields of paediatrics, virology, epidemiology, clinical neurology and neurophysiology. The expert committee meets once every quarter of the year to discuss AFP cases that could not be discarded on laboratory results. In 4th quarter 2010, the Expert Committee met and discussed the summary of activities of the AFP surveillance programme and the AFP case that were scheduled to be reviewed by the committee. All the cases discussed had stool samples collected late with negative virology results and had persistent residual paralysis at 60 days of onset paralysis.

2. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 4th Quarter 2010. Last case of cholera was reported in the country in January 2003.

3. TETANUS

During the 4th Quarter 2010, 07 suspected Tetanus cases were notified to the Epidemiology Unit. This is in comparison to 04 cases reported during the previous quarter and 09 cases in the corresponding quarter of 2009.

Of the notified, 2 cases were compatible with case definition and field investigations were carried out. No deaths were reported and characteristics of investigated cases are given in Table 3.

4. MEASLES

During 4th quarter 2010, 12 cases of suspected measles were notified to the Epidemiology Unit, compared to 35 cases notified during the 4th quarter 2009. All notified cases were investigated by relevant Medical Officers of Health (MOOH) in their field epidemiological investigations and 10 were compatible with clinical case definition of measles. Kalutara reported 5 cases from Agalawatta, Bandaragama, Bulathsinhala, Madurawala, and Ingiriya, Colombo reported 2 cases from Kolonnawa and Moratuwa, Galle (Bope Poddala), Anuradhapura (Thirappane) and Rathnapura (Balangoda) reported one case each from their districts. Of the 10 cases reported 8 were notified from hospitals, one case notified by a General practitioner and one found in the community field visits.

Laboratory investigations of fever and rash patients suspected of Measles/Rubella (13) are carried out in the WHO accredited Laboratory in Medical Research Institute (MRI) and no laboratory confirmed measles cases were identified. In fact non measles suspected measles cases for the 4th quarter 2010 was 100%.

Outbreaks of measles were not reported during the quarter.

Table 3

SELECTED CHARACTERISTICS OF CONFIRMED CASES OF TETANUS – 4th QUARTER

Sex	Male	2
	Female	0
Age Group	45-49	1
	>=60 years	1
Districts	Matale	1
	Ratnapura	1
Immunization Status	Immunized	1
	Non - Immunized	0
	Unknown	1

Table 4

SELECTED CHARACTERISTICS OF CONFIRMED CASES (WITH SPECIAL INVESTIGATIONS) OF MEASLES – 4th QUARTER

Sex	Male	6
	Female	4
Age group	<1 year	0
	1-9 years	1
	10-14 years	2
	15-19 years	1
	20-24 years	2
	>25 years	4

5. LEPTOSPIROSIS

During the 4th Quarter 2010, 1574 cases and 35 deaths (CFR 2.2%) due to Leptospirosis were notified to the Epidemiology Unit compared to 926 cases and 35 deaths in the previous quarter and 1642 cases and 44 deaths during corresponding quarter of 2009 .

The special surveillance conducted regarding Leptospirosis reveal that majority 68.39% were in the 21-50 years age group and male female ratio is 8:1

6. HUMAN RABIES

Nineteen (19) cases of Human Rabies were notified to the Epidemiology Unit in the 4th quarter 2010, compared to 5 cases in the previous quarter and 22 cases in the corresponding quarter of year 2009. Distribution of cases by district is given in Table 24.

Animal Rabies

During the quarter 148 dogs were reported positive for rabies compared to 113 in the previous quarter and 194 in the corresponding quarter of 2009. In addition the following animals were also reported positive;

Cats-10, Domestic Ruminants-05,

Wild Animals – 02

Rabies Control Activities*

Dog vaccination - A total of 170713 dogs were immunized during the 4th Quarter 2010 when compared to 307400 in the previous quarter and 262171 in the corresponding quarter of last year.

Animal Birth Control

Chemical - 7313 female dogs were injected with birth control injections (Progesterone) during the quarter under review.

Surgical - 34184 female dogs were subjected to sterilization by surgical method during the quarter under review.

*Source – Director/PHVS

7. ENTERIC FEVER

In the 4th Quarter 2010, a total of 567cases of enteric fever were reported to the Epidemiology Unit, compared to 427 cases in the previous quarter and 566 cases in the corresponding quarter of 2009. The district of Jaffna (169) reported the highest number of cases. (Table 24).Followed by Colombo (105 cases) and Kurunegala (42 cases).

8. VIRAL HEPATITIS

In the 4th quarter 2010, 389 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 424 cases in the previous quarter and 884 cases in the corresponding quarter of 2009. Gampaha & Kegalle Districts reported the highest number of cases (41 each) followed by Kandy (39) and Jaffna (37) Districts.

9. DYSENTERY

In the 4th Quarter 2010, 1518 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 1612 cases in the previous quarter and 1960 cases in the corresponding quarter of 2009. Puttalam (182 cases), Kurunegala (150 cases) and Anuradhapura (110 cases) reported the highest number of cases.

10. MALARIA

The number of microscopically confirmed malaria cases detected during the 4th quarter of 2010 was higher than the number detected during the corresponding period of 2009 as seen in Table 7.

The number of P.f. Infection detected has decreased during the period under review.

11. JAPANESE ENCEPHALITIS (JE)

During the 4th quarter 2010, 40 cases of suspected Encephalitis were reported to the Epidemiology Unit. Among the reported cases 27 (67.5%) were investigated and 05 were found to laboratory confirmed as JE. Out of these 05 (12.5%) confirmed cases, three were under 05 years of age and two were in the age group 50-60 years. This is in comparison to 42 cases of encephalitis, five confirmed JE and no deaths reported in the corresponding quarter of 2009.

All confirmed JE cases were subjected to case based investigation by MOH. The highest number of confirmed cases had been reported among <5 years of old age group. Confirmed JE cases had been reported from Gampaha (02), Kegalle(01), Kalutara(01) and Colombo (01) Districts. MOH areas that reported confirmed JE cases were Seeduwa (01) Gampaha (01), Mawanella (01), Mathugama(01) and Hanwella (01). Majority of the JE cases (03) had not been vaccinated. The vaccination status was unknown in (01) patient.

Table 5

SELECTED CHARACTERISTICS OF CONFIRMED OF JE REPORTED IN THE 4th QUARTER 2010

Sex	Male	4
	Female	1
Age group	<5y	3
	50-60y	2
District	Colombo	1
	Gampaha	2
	Kegalle	1
	Kalutara	1
MOH Areas	Seeduwa	1
	Gampaha	1
	Mawanella	1
	Mathugama	1
	Hanwella	1
Immunization status	Immunized	1
	Non - immunized	3
	Unknown	1

Table 6

RESULTS OF THE LABORATORY SURVEILLANCE OF AES CASES FOR JAPANESE ENCEPHALITIS-

Month	Serum specimens	No positive for JE (%)	CSF mens	speci-No positive for JE
				(%)
October	14	0 (0%)	38	1 (2.6%)
November	11	0 (0%)	34	0 (0%)
December	12	1 (8.33%)	40	3 (7.5%)
Total	37	1 (2.7%)	112	4 (3.57%)

Under the WHO coordinated JE lab surveillance network, the virology section of the Medical Research Institute received 37 specimens of serum and 112 specimens of CSF from Acute Encephalitis patients. Only one serum specimen was positive for JE, while 4 CSF samples were positive for JE.

Table 7

RESULTS OF BLOOD SMEAR EXAMINATION FOR MALARIA PARASITES—4TH QUARTER 2010

	4th Quarter 2009	4th Quarter 2010
No. of blood smears examined	244906	268676
No. of positives	107	134
No. of <i>P. vivax</i>	96	131
No. of <i>P. falciparum</i>	9	1
No. of mixed infections	2	2
No. of infant positives	-	-
Slide positivity rate (S.P.R.)	0.04%	0.05%
P.v. : P.f. ratio	11:1	131:1
Percentage of infant positives	0%	0%

Table 8

**DISTRIBUTION OF MALARIA CASES BY RMO
DIVISION - 4TH QUARTER 2010**

RMO	Blood smears	Positives	P.v.	P.f./ Mixed
Colombo	19537	1	1	0
Gampaha	8358	0	0	0
Kalutara	4429	0	0	0
Kandy	7022	0	0	0
Matale	5677	0	0	0
Nuwara Eliya	339	0	0	0
Galle	5008	0	0	0
Matara	4218	0	0	0
Hambantota	10102	5	4	1
Jaffna	20607	2	2	0
Kilinochchi	8420	11	11	0
Mannar	7460	27	26	1
Vavuniya	19802	36	36	0
Mullaitivu	7676	42	42	0
Batticaloa	23229	0	0	0
Ampara	5714	1	1	0
Trincomalee	17244	0	0	0
Kurunegala	15692	0	0	0
Maho	3730	0	0	0
Puttalam	7950	1	1	0
Anuradhapura	21938	3	3	0
Polonnaruwa	17795	1	0	1
Badulla	4875	1	1	0
Moneragala	7329	3	3	0
Ratnapura	5260	0	0	0
Kegalle	2739	0	0	0
Kalmunai	6526	0	0	0
TOTAL	268676	134	131	3

P.v.– Plasmodium vivax

P.f.- Plasmodium falciparum

Table 9

**MORBIDITY AND MORTALITY DUE TO DF/DHF
- 4TH QUARTER 2010**

RDHS Division	Cases	Percentage (%)	Deaths
Colombo	510	19.72	1
Gampaha	265	10.25	2
Kalutara	98	3.79	1
Kandy	102	3.94	0
Matale	85	3.29	0
Nuwara Eliya	30	1.16	0
Galle	67	2.59	0
Hambantota	41	1.59	0
Matara	49	1.89	0
Jaffna	278	10.75	5
Kilinochchi	13	0.50	0
Mannar	47	1.82	0
Vavuniya	10	0.39	0
Mullaitivu	5	0.19	0
Batticaloa	50	1.93	0
Ampara	14	0.54	0
Trincomalee	50	1.93	2
Kurunegala	94	3.63	0
Puttalam	101	3.91	0
Anuradhapura	99	3.83	1
Polonnaruwa	20	0.77	0
Badulla	109	4.22	0
Moneragala	116	4.49	0
Ratnapura	217	8.39	1
Kegalle	68	2.63	0
Kalmunai	48	1.86	0
TOTAL	2586	100	13

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

During the 4th Quarter 2010, 2586 cases of DF/DHF and 13 deaths were reported (CFR 0.50%) when compared to 12144 cases and 71 deaths (CFR 0.58%) reported during the previous quarter. Proportions of cases reported in October, November and December were 44.20%, 25.27% and 30.53% respectively.

Table 9 shows the distribution of DF/DHF cases and deaths in the RDHS divisions during the 4th quarter.

Special surveillance data on 225 confirmed cases were received and analysed for the 4th quarter 2010. Age distribution of reported cases showed that 56 cases (24.9%) were below 15 Years of age. The majority of the cases (34, 15.11%) were between 20-24 years of age.

According to the clinical findings, majority of the reported cases (84.4%) were classified as dengue fever. 15.1% were classified as DHF with 8.9% and 6.2% falling into DHF I, DHF II 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 4th Quarter 2010, 748 blood samples were tested using 1gM capture ELISA test and Haem Agglutination Inhibition test (HAI) at the Department of Virology, MRI and 245 samples were confirmed as positive. (Table 11).

Table 10

**RESULTS OF LARVAL SURVEY CARRIED OUT BY DEPARTMENT OF ENTOMOLOGY,
MRI 4TH QUARTER 2010**

Area	October		November		December	
	Breteau Index		Breteau Index		Breteau Index	
	Ae. aegypti	Ae. albopictus	Ae. aegypti	Ae. albopictus	Ae. aegypti	Ae. albopictus
Colombo						
Nugegoda	0.57	3.4	1.14	8.0	9.3	2.7
Kaduwela	-	13.7	-	10.5	-	8.7
Moratuwa	2.85	0.57	2.0	-	1.7	0.55
Gampaha						
Ragama	1.51	6.53	0.54	9.2	0.86	4.72
Wattala	1.4	2.4	2.5	5.4	8.65	8.65
Minuwangoda	-	9.75	-	26.1	-	-
Mirigama	-	8.01	-	11.7	-	-
Biyagama	-	8.47	-	-	-	-
Ja-Ela	2.7	10.7	1.0	8.6	1.7	9.7
Mahara	-	2.0	-	11	-	19
Kelaniya	2.2	6.2	0.72	5.0	0.72	6.5
Negombo	3	2	1.0	7.0	1.0	11.0

Table 11

DHF STATISTICS FROM DEPARTMENT OF VIROLOGY, MRI 4TH QUARTER 2010

Month	Clinically Suspected cases of DF	Serologically confirmed Cases of DF
October	305	93
November	259	87
December	184	65
Total	748	245

13. RUBELLA

During the 4th quarter 58 suspected Rubella cases were reported to the Epidemiology Unit compared to 2 cases reported during the 4th quarter 2009. Of the reported cases 55 of them were reported from an outbreak in University of Peradeniya, in MOH area Gangawatakorale. Eight of the cases were laboratory confirmed from this outbreak and others were epidemiologically confirmed among contacts of confirmed cases. Single cases were reported from districts of Nuwara Eliya, Kurunegala and Polonnaruwa. No Congenital Rubella cases were reported during the 4th quarter.

14. TUBERCULOSIS

A total of 2604 Tuberculosis patients were registered for 4th Quarter 2010 by the National Programme for Tuberculosis Control and Chest Diseases. Of this total, 1883 suffered from pulmonary disease, and the balance 721 patients from non-pulmonary disease. Of these patients 1276 were bacteriologically confirmed with a bacteriological confirmation rate of 67.76%. The distribution of tuberculosis patients by RDHS division is given in Table 12.

B.C.G. Vaccination

A total of 90645 B.C.G. vaccinations were carried out during the quarter with 93.4% coverage.

Table 12.

TUBERCULOSIS PATIENTS BY RDHS DIVISIONS - 4TH QUARTER 2010

RDHS DIVISION	PTB	EPTB	Total	Pulmonary TB Direct Smear	
				No. +VE	%
Colombo	433	117	550	353	81.52
Gampaha	195	83	278	151	77.44
Kalutara	153	41	194	99	64.71
Kandy	165	68	233	82	49.70
Matale	39	20	59	27	69.23
Nuwara Eliya	39	23	62	28	71.79
Galle	121	60	181	76	62.81
Matara	48	16	64	28	58.33
Hambantota	34	16	50	27	79.41
Jaffna	69	22	91	20	28.99
Mannar	7	3	10	5	71.43
Vavuniya	20	9	29	13	65.00
Mullativu	1	1	2	0	0.00
Kilinochchi	21	1	22	0	0.00
Trincomalee	35	11	46	22	62.86
Batticaloa	27	19	46	24	88.89
Ampara	35	3	38	23	65.71
Kurunegala	78	48	126	34	43.59
Puttalam	34	21	55	26	76.47
Anuradhapura	73	32	105	48	65.75
Polonnaruwa	10	1	11	9	90.00
Badulla	44	25	69	31	70.45
Monaragala	23	17	40	13	56.52
Rathnapura	67	30	97	60	89.55
Kegalle	74	30	104	54	72.97
Kalmunai	38	4	42	23	0.00
Total	1883	721	2604	1276	67.76

PTB-Pulmonary Tuberculosis

EPTB- Extra Pulmonary Tuberculosis

Data from Central TB Register

Source - National TB Register

15. SURVEILLANCE AT SEA PORT

Details of the vaccinations carried out by the Assistant Port Health Office during the 4th quarter 2010, is as follows;

	Total
a. Yellow fever	913
b. Meningococcal meningitis	173
C. Polio vaccination	00

16. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 4th Quarter 2010 is given below.

1. Yellow Fever Surveillance

a. No. with valid certificate	-	03
b. No. without valid certificate & Deported	-	-
c. No. without valid certificate & Isolated	-	-

2. Airport Sanitation

a. No. of sanitary inspections carried out including food establishments	-	36
b. No. of food samples taken under Food Act	-	04
c. No. found defective	-	00
d. No. of court cases/prosecuted/warned	-	00
e. No. of water samples tested	-	09
f. No. reported contaminated	-	00

3. Release of Human Remains

a. No. of Human Remains released	-	129
b. No. referred to JMO for post-mortem	-	04
c. No. alleged suicide	-	06

4. Other Health Activities

a. Polio Vaccination No. of doses given	-	00
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17. LEPROSY**QUARTERLY RETURN OF LEPROSY STATISTICS - 4TH QUARTER 2010**

Table 13

1. National

	At the end of the quarter			Cumulative for end of the quarter		
	4th Quarter 2010	4th quarter 2009	Diff. (%)	2010	2009	Diff. (%)
New patients detected	506	515	-1.74	2078	1955	6.29
Children	48	54	-11.1	201	190	5.78
Grade 2 Deformities	43	31	38.7	147	128	14.84
Multi-Bacillary	235	237	-0.84	960	935	2.67
Females	208	221	-5.88	900	849	6.00

2. Districts

District	New patients	Deformities	Child	MB	Females
Colombo	98	06	08	49	42
Gampaha	64	03	08	29	31
Kalutara	63	04	04	24	29
Western	225	13	20	102	102
Galle	03	00	00	02	01
Matara	22	03	01	12	07
Hambantota	23	02	02	14	09
Southern	48	05	03	28	17
Kandy	14	02	00	03	07
Matale	08	01	00	04	02
Nuwara Eliya	03	01	00	03	01
Central	25	04	00	10	10
Anuradhapura	24	04	00	07	06
Polonnaruwa	16	03	00	08	05
North Central	40	07	00	15	11
Kurunegala	24	02	02	15	07
Puttalam	27	01	05	12	18
North Western	51	03	07	27	25
Kegalle	11	01	00	07	01
Ratnapura	25	01	04	12	08
Sabaragamuwa	36	02	04	19	09
Badulla	09	00	00	08	02
Moneragala	04	01	00	03	02
Uva	13	01	00	11	04
Trincomalee	07	00	01	04	02
Batticaloa	34	02	08	07	18
Ampara	15	04	01	09	05
Kalmunai	06	01	01	01	01
Eastern	62	07	11	21	26
Jaffna	03	01	00	02	01
Vavuniya	00	00	00	00	00
Mannar	02	00	02	00	02
Mullativu	01	00	01	00	01
Kilinochchi	00	00	00	00	00
Northern	06	01	03	02	04
Sri Lanka	506	43	48	235	208

Source : Anti Leprosy Campaign

18. SURVEILLANCE REPORT ON AEFI UP TO 4TH QUARTER 2010

Surveillance of Adverse Events Following Immunization (AEFI) has been effective up to 4th quarter 2010. Completeness of reports has reached 96.9% while 44.8% reports were received in time at the Epidemiology Unit. This indicates good compliance for the system at MOH level.

Colombo, Gampaha, Nuwara Eliya, Hambantota, Ampara, Kurunegala, Anuradhapura, Polonnaruwa, Badulla, Moneragala, Kegalle were able to send all reports while reports from Galle (99.6%), Kalmunai (98.7%) and Kandy (98.3%) were very high. Sri Lanka average for completeness is 96.9%. Best timeliness was reported from Kegalle (72.7%) followed by Vavuniya district (68.1%).

Highest percentage of nil reports were received from Killinochchi (88.4%) and Mannar district (83.3%) and followed by Kalmunai district (75.3%) which is much higher than the Sri Lanka average of 42.5%, indicating the need for more attention regarding surveillance.

The lowest percentage of (14.2%) nil returns was received was from the Kurunegala district followed by Gampaha district (15%).

Highest rate of 962.8 AEFI per 100,000 immunizations was reported from Mullaitivu district with a total number of 92 AEFI. The highest number of 784 AEFI was reported from Kurunegala district with a rate of 170.7 per 100,000.

The highest number (2359) and rate of AEFI (512.0 per 100,000 immunizations) were reported against DPT vaccine. The number and rates of reported different AEFI against different vaccines are given in table 15.

The most common adverse reaction was high fever (1867) followed by allergic reaction (1520). Among serious cases, six cases of deaths were reported during 2010 and DPT was the vaccine causing a large number of adverse reactions compared to others.

Table 14

COMPLETENESS AND TIMELINESS OF MONTHLY REPORTING AND RECEIPT OF "NIL" REPORTS OF AEFI BY RDHS DIVISIONS - 4TH QUARTER 2010

RDHS Division	(%) Completeness	(%) Timeliness	(%) "Nil" Returns	Reported AEFI	
				Number	Rate
Colombo	100.0	41.7	21.4	406	75.3
Gampaha	100.0	48.3	15.0	487	88.1
Kalutara	94.4	26.5	40.4	266	83.6
Kandy	98.3	38.2	41.3	283	80.9
Matale	97.2	55.0	28.6	269	182.7
Nuwara Eliya	100.0	39.1	60.9	92	48.4
Galle	99.6	38.3	56.4	163	58.2
Hambantota	100.0	50.8	22.7	279	152.0
Matara	98.0	57.0	63.0	106	48.0
Jaffna	95.5	64.3	28.6	548	355.6
Kilinochchi	89.6	0.0	88.4	5	21.3
Mannar	60.0	13.9	83.3	10	39.5
Vavuniya	97.9	68.1	72.3	27	38.7
Mullaitivu	43.3	0.0	61.5	92	962.8
Batticaloa	98.2	37.0	63.6	158	88.3
Ampara	100.0	28.6	59.5	79	81.4
Trincomalee	93.9	44.4	69.4	69	51.7
Kurunegala	100.0	46.7	14.2	784	170.7
Puttalam	97.2	51.4	20.0	213	87.7
Anuradhapura	100.0	47.4	28.5	414	141.5
Polonnaruwa	100.0	57.1	42.9	123	100.2
Badulla	100.0	53.9	43.3	191	88.1
Moneragala	100.0	43.9	50.0	120	87.6
Ratnapura	95.4	30.6	49.0	212	71.2
Kegalle	100.0	72.7	15.9	323	163.4
Kalmunai	98.7	33.8	75.3	65	43.1
Sri Lanka	96.9	44.8	42.5	5784	103.4

* Rate Per 100,000 immunizations

Table 15

NUMBER AND RATE OF SELECTED AEFI REPORTED BY VACCINE AND BY TYPE OF AEFI

Vaccine	Seizure	Allergic Reaction	Abscess	Severe Local Reactions	High Fever	Lymphadenitis	HHE	Meningitis	Encephalitis	Encephalopathy	Nodule	Osteitis/Osteomyelitis	Paralytic	Injection Reaction	Arthralgia	*Deaths	Toxic Shock Syndrome	Anaphylactic Shock	Persistent Scream-ing	ADEM	Others	Total	Rate/ 100,000 dosed
BCG	1	4	7	2	3	10	0	0	0	0	3	0	0	0	0	0	0	1	0	1	32	9.1	
DPT	195	376	217	224	754	0	4	1	0	0	266	0	0	0	11	1	1	0	33	1	275	2359	512.0
Penta	73	243	44	77	771	0	34	3	0	1	116	1	0	0	2	4	0	0	59	0	191	1619	181.5
OPV	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	7	0.4
Measles	12	89	1	3	78	0	1	0	0	0	3	0	0	0	1	0	0	0	1	0	18	207	60.1
DT	8	59	14	23	57	0	4	0	0	0	13	0	0	0	0	0	0	1	0	0	52	231	68.4
TT	0	29	2	4	3	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	10	50	16.0
JE	31	384	4	29	137	0	3	1	1	1	7	0	0	0	1	0	0	0	1	0	82	682	119.1
aTd	2	21	1	0	2	0	1	0	0	0	1	0	0	5	0	0	0	1	0	0	96	130	80.6
Hep	0	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	6.9
MR	7	294	0	9	54	0	1	1	1	0	2	0	0	0	2	1	0	0	0	0	27	399	116.2
Total	330	1504	292	374	1863	10	48	6	2	2	413	1	1	5	17	6	1	3	96	1	761	5736	103.4

In addition , H1N1 vaccine was given in 2010 4th quarter and 2 seizures, 16 allergic reaction and 4 high fever AEFI were reported in relation to the HN1 vaccine.

*There were 06 deaths reported up to 3rd quarter 2010. AEFI expert committee reviewed all cases and excluded the causality by the vaccine

Excluded Vitamin A mega doze and other vaccines.

19. SEXUALLY TRANSMITTED DISEASES

Table 16

NEW EPISODES OF STD/HIV/AIDS REPORTED OR TREATED AT STD CLINICS IN SRI LANKA* 4TH QUARTER 2010

Disease	New cases or new disease episodes during the quarter			Total new cases or new episodes for the calendar year up to end of the quarter **			
	Male	Female	Total	Male	Female	Total	
HIV positives ¹	17	15	32	77	44	121	
AIDS	4	4	8	22	9	31	
Syphilis	Early Syphilis ²	27	15	42	152	47	199
	Late Syphilis ³	60	78	138	274	280	554
	Congenital Syphilis ⁴	0	2	2	3	6	9
Gonorrhoea ⁵	69	26	95	264	104	368	
Ophthalmia Neonatorum ⁶	0	3	3	4	4	8	
Non specific cervicitis/urethritis	155	301	456	548	1204	1752	
Chlamydial Infection	0	0	0	13	10	23	
Genital Herpes	330	397	727	1172	1338	2510	
Genital Warts	243	169	412	914	624	1538	
Chancroid	0	0	0	10	10	20	
Trichomoniasis	0	21	21	11	95	106	
Candidiasis	216	394	610	899	1484	2383	
Bacterial Vaginosis	0	248	248	0	1078	1078	
Other sexually transmitted diseases ⁷	174	37	211	535	160	695	
Non-venereal ⁸	629	439	1068	3058	2008	5066	

* - Central STD clinic Colombo and peripheral STD clinics of National STD/AIDS Control Programme of Sri Lanka

** - Includes adjustments for revised diagnosis, reporting delays or any other amendments

¹ - Includes AIDS cases

² - Diagnosed within 2 years of infection and considered to be infectious

³ - Diagnosed after 2 years of infection and considered to be non-infectious

⁴ - Includes both early and late cases

⁵ - Includes presumptive Gonorrhoea

⁶ - Includes both gonococcal and chlamydial conjunctivitis in neonatal period

⁷ - Includes Lympho granuloma venerium, Granuloma inguinalae, Molluscum contagiosum, Scabies, Tinea, Hepatitis B etc.

⁸ - Number of STD clinic attendees who were not having sexually transmitted diseases.

**20. BACTERIOLOGY REPORT –4th QUARTER
2010 - MEDICAL RESEARCH INSTITUTE**

Table 17

	Oct	Nov	Dec
(A) CHOLERA			
No. of stool specimens Examined	30	-	38
EI Tor Cholera	-	-	-
Ogawa	-	-	-
Inaba	-	-	-
Cholera 0139	-	-	-
(B) SALMONELLA			
Blood– No. Examined	91	63	43
S.typhi	-	-	-
S.paratyphi A	2	1	-
Stools - No. examined	111	106	102
S.typhi	-	-	-
S.paratyphi A	-	-	-
Others	6	3	1
(C) SHIGELLA			
No. Examined	111	106	102
Sh.flexneri 1	-	-	-
Sh.flexneri 2	-	2	-
Sh.flexneri 3	-	-	-
Sh.flexneri 4	-	-	-
Sh.flexneri 5	-	-	-
Sh.flexneri 6	-	-	-
Sh. sonnei	1	1	1
Sh. Others	-	-	-
(D) ENTEROPATHOGENIC E.COLI			
No.Examined	10	40	8
No.+ve Group A	1	1	-
(E) CAMPYLOBACTER			
No.Examined	69	106	64
No. Positive	4	1	1
(F) SPECIAL TESTS			
	42	14	27

21. SURVEILLANCE REPORT ON INVASIVE BACTERIAL DISEASES 4th QUARTER - 2010

Surveillance of Invasive Bacterial Disease (IBD) was carried out by the Epidemiology Unit and the Microbiology laboratory of the LRH in collaboration with the SEAR office of the World Health Organization. Surveillance was conducted among children aged 2-59 months of age admitted to LRH for invasive bacterial infection (IBI). The total admissions in the wards where surveillance is carried out during the 4th quarter of 2010 was 11138. Total admissions in the surveillance age group (2-59 months) were 5792 (52%). Total number of IBI (pneumonia, Meningitis, sepsis) in the age group of 2-59 months was 760 (13.1%). Of these 760 patients, 533 patients (70.1%) were enrolled for the IBD surveillance.

Number of blood cultures performed among enrolled patients were 150. Number of CSF samples eligible for surveillance was 58. Neither Pneumococcus nor Haemophilus influenza were isolated from CSF cultures.

22 INFLUENZA SURVEILLANCE

As part of the pandemic preparedness activities that was initiated in the country in 2005 following global Avian/Pandemic preparedness programme, 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. Both these activities are supervised by the National Technical Committee for Avian/Pandemic Influenza Preparedness. This report summarizes progress of influenza surveillance activities for the 4th quarter 2010, October to December.

Human Influenza surveillance

ILI Surveillance – Laboratory Component

Under ILI laboratory surveillance a total of 658 samples were received from hospitals identified as sentinel surveillance sites for Avian/Pandemic Influenza for the said quarter. There were 222 samples in October, 206 in November and 230 in December. Second wave of the H1N1 pandemic was detected in the country by September 2010 and this large number of samples which far exceeded the usual number expected could be attributed this outbreak situation. Infectious Diseases Hospital (IDH) sent in the highest number of samples (152) with Lady Ridgeway Hospital (LRH) and North Colombo Teaching Hospital (NCTH) sending in 70 and 63 samples respectively. However Sri Jayawardanapura General Hospital (SJGH) and GH Badulla failed to send any samples within the quarter. There were 2 samples from GH Ampara and 3 from TH Jaffna. Table 1 below shows the performance of sentinel hospitals in the laboratory component of the surveillance programme for this quarter.

Table 18: performance of sentinel hospitals in the laboratory component of the surveillance programme 4th Quarter 2010

Institution	OCT	NOV	DEC	Total
LRH	21	15	34	70
NHSL	13	7	3	23
CSTH	15	28	3	46
IDH	53	26	27	152
SJGH	0	0	0	0
NCTH	15	14	34	63
TH Peradeniya	7	8	18	33
GH Nuwara Eliya	10	10	12	32
TH Karapitiya	3	15	5	23
GH Matara	14	4	3	21
TH Jaffna	0	1	2	3
GH Vavuniya	4	0	4	8
GH Ampara	0	0	2	2
TH Batticaloa	6	9	13	28
TH Kurunegala	12	13	10	35
GH Chilaw	13	17	6	36
TH Anuradhapura	10	10	25	45
GH Polonnaruwa	6	16	8	30
GH Badulla	0	0	0	0
GH Ratnapura	20	13	21	54
Total	222	206	230	658

These samples were processed in the Medical Research Institute (MRI) which is the National Influenza Centre (NIC) for the country. Pandemic A H1N1 was the predominant influenza viral strain within the quarter and there were a total of 120 cases. November saw the peak of this second wave of the pandemic with 55 cases. There were 32 cases in October and 33 in December.

In contrast to the previous quarter Influenza B was increasingly evident as another prominently circulating viral strain. In October, 8 samples was positive for Influenza B. There were 11 positive isolates in November and 15 in December . Twenty seven samples were positive for Influenza A and un typed within the quarter. Table 19 below shows the results yielded for Influenza samples in the 4th quarter 2010 at MRI.

ILI Surveillance Epidemiological Component

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

In October 2010 there were 4692 ILI cases visiting OPD of sentinel hospitals and 4837 in November with 5236 in December. However it has to be noted that these numbers are grossly underestimated since only some of the sentinel hospitals had sent in these data.

The following graph in figure 1 shows the distribution of ILI attendance in OPD by month 2008-2010. In 2009 the country suffered from the Influenza A H1N1 pandemic and in 2010 its second wave was reported. Year 2008 was a non-pandemic year.

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 much higher 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.

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 4th quarter 2010 there were 701 pooled samples and 718 serum samples collected and tested at the VRI for HPAI. None of the samples had yielded HPAI. The following table 20 shows the number of samples collected by month and the districts they were collected from.

Table 19: Types of Respiratory Viruses Isolated in ILI samples – 4th Quarter 2010

MONTH	TOTAL	ADENO	INFLU B	PARA Influenza	RSV	PA (H1N1)	H1N1	H3N2	A UNTPED
October	222	0	8	0	0	32	0	0	6
November	226	0	11	0	0	55	0	0	6
December	230	0	15	0	0	33	0	0	15

Figure 1: Distribution of OPD ILI visits by month – 2008 - 2010

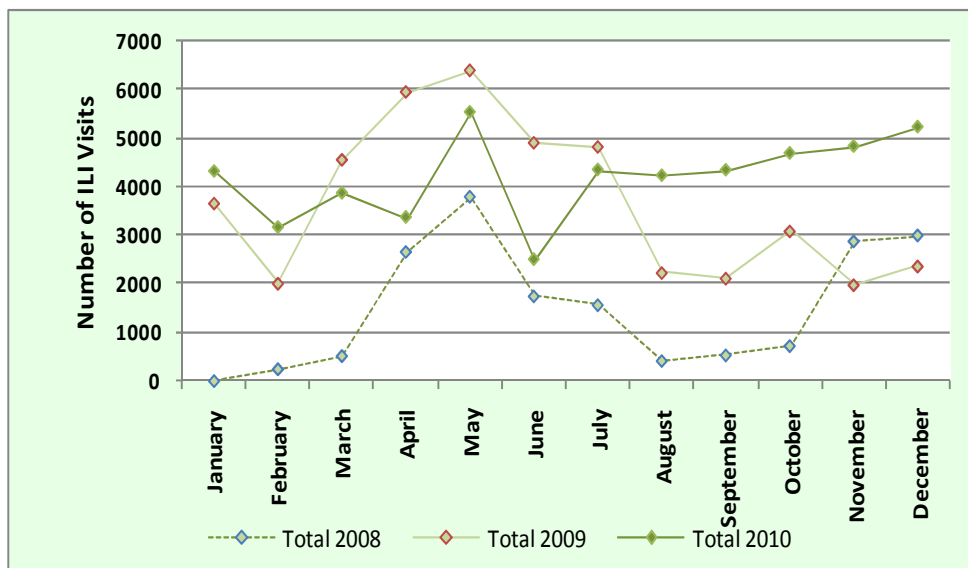


Table 20: Animal samples collected by month and district – 4th Quarter 2010

Month	No. of samples		Districts samples were collected from
	Pooled	Serum	
October	194	332	Gampaha, Colombo, Anuradhapura, Polonnaruwa, Puttalam, Hambantota, Mannar, Kurunegala
November	200	97	Gampaha, Colombo, Matara, Badulla, Ratnapura, Jaffna, Polonnaruwa, Puttalam, Kurunegala
December	307	289	Gampaha, Colombo, Puttalam, Hambantota, Ampara, Kegalle, Kurunegala, Jaffna

CHICKEN POX SURVEILLANCE REPORT-2010

Chicken pox was made a notifiable disease from year 2005 in Sri Lanka. Even though chickenpox is a mild disease in children, it can cause complications in adults, pregnant women, neonates and immune compromised patients. Neonates whose mothers are not immune to chickenpox may suffer severe prolonged or fatal infection.

In year 2010, the number of cases reported and confirmed through routine notification system is given in Table 21. Kurunegala District has notified the highest number of cases.

Data obtained from special case investigation surveillance system revealed that 89% cases were compatible with case definition. A total of 17% cases had been hospitalized. Out of them, 18 had complications, such as Myocarditis, Pneumonia, Bacterial infection, Necrotizing fasciitis, Septicemias.

Table 21: Total number of chickenpox cases, Notified and Confirmed for year 2010, from entire Sri Lanka

District	Notified*	Confirmed**	Notification Rate (Per 100,000 popula-
Colombo	234	170	6.7
Gampaha	102	68	2.8
Kalutara	282	209	17.7
Kandy	88	49	3.5
Matale	67	46	9.5
Nuwara-Eliya	121	109	14.6
Galle	209	150	13.9
Hambanthota	53	39	6.8
Matara	173	130	15.9
Jaffna	129	92	14.7
Kilinochchi	1	1	2.8
Mannar	8	8	8.4
Vavuniya	44	32	10.6
Mullaitivu	1	0	0
Batticalo	36	8	1.4
Ampara	132	99	32.8
Trincomalee	94	59	14.6
Kurunagala	331	238	15.1
Puttalam	87	74	8.9
Anuradapura	290	237	28.8
Polonnaruwa	139	90	22.7
Badulla	115	80	9.5
Moneragala	129	93	19.9
Ratnapura	217	122	10.9
Kegalle	274	215	26
Kalmuni	57	34	7.9
Total	3413	2452	11.7

*Source-H399 (Weekly Return of Communicable Diseases)
**Source - H411

Figure 2 : Number of cases of chickenpox notified from entire Sri Lanka by month from 2008 - 2010

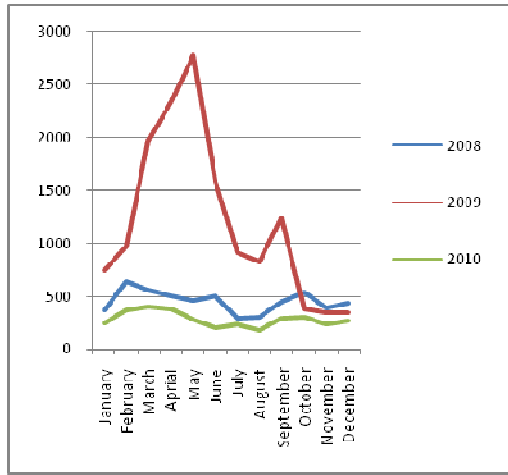


Figure 3 : Age Distribution of Chickenpox patients in Sri Lanka - 2010

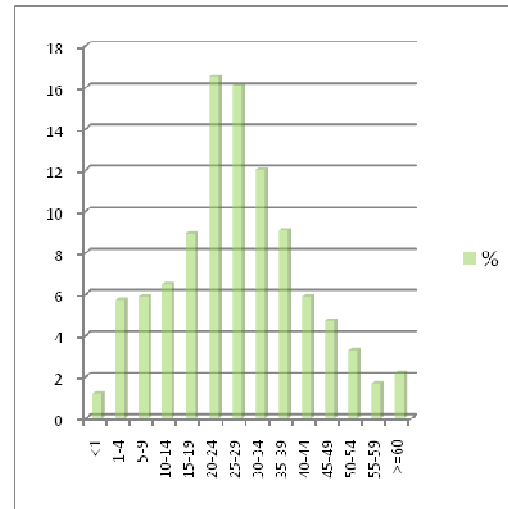
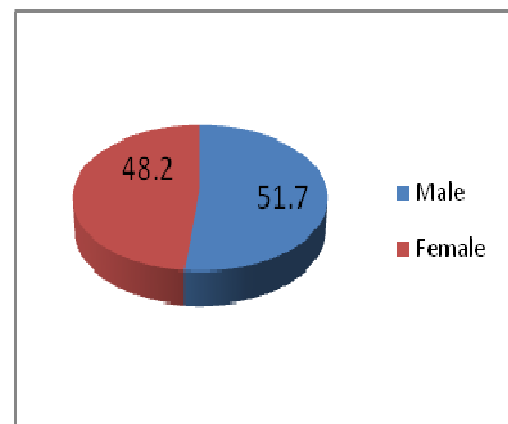


Figure 4 : Sex Distribution of Chickenpox patients in Sri Lanka -2010



MUMPS SURVEILLANCE REPORT—2010

Mumps was made a notifiable disease from the year 2005 in Sri Lanka. Infection with mumps virus can lead to acute complications such as aseptic meningitis, orchitis, pancreatitis and nerve deafness.

To control and prevent mumps it is important to continue surveillance activities to understand the epidemiology of the disease in Sri Lanka. Following tables and figures give the Basic Epidemiological pattern of reporting of mumps in Sri Lanka in 2010.

Table 22: Total number of cases Notified and Confirmed for 2010

District	Notified	Con- firmed	Rate per 100,000
Colombo	94	64	2.5
Gampaha	38	24	1
Kalutara	71	52	4.4
Kandy	51	39	2.8
Matale	31	24	4.9
Nuwara-Eliya	33	22	2.9
Galle	60	45	4.2
Hambanthota	16	14	2.4
Matara	63	49	6
Jaffna	48	28	4.5
Kilinochchi	2	1	2.9
Mannar	20	8	8.4
Vavuniya	14	11	3.6
Mullaitivu	3	0	0
Batticalo	0	0	0
Ampara	42	25	8.3
Trincomalee	20	13	3.2
Kurunagala	160	122	7.8
Puttalam	14	11	1.3
Anuradapura	65	49	6
Polonnaruwa	53	40	10.1
Badulla	40	32	3.8
Moneragala	50	27	5.8
Ratnapura	110	76	6.8
Kegalle	169	128	15.5
Kalmuni	20	16	3.7
Total	1287	920	4.4

*Source-H399 (Weekly Return of Communicable Diseases)
**Source - H411

Figure 5: Total number of mumps cases, Notified by month from 2008 - 2010

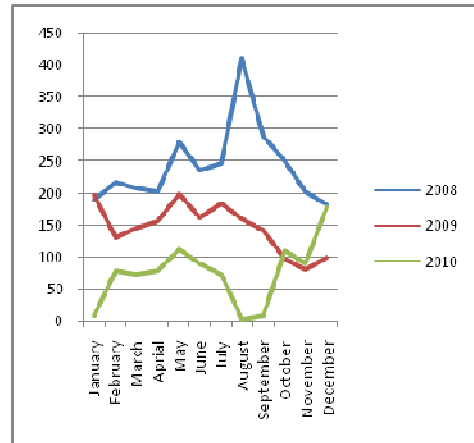


Figure 6: Age Distribution of Mumps patients in Sri Lanka, 2010

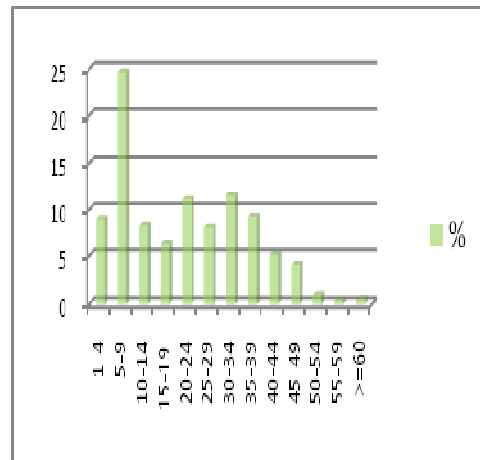
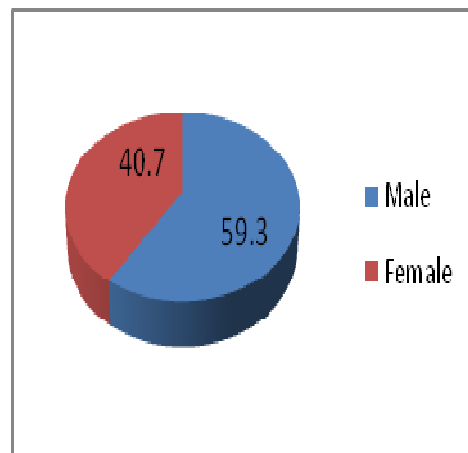


Figure 7: Sex distribution of Mumps patients in Sri Lanka, 2010

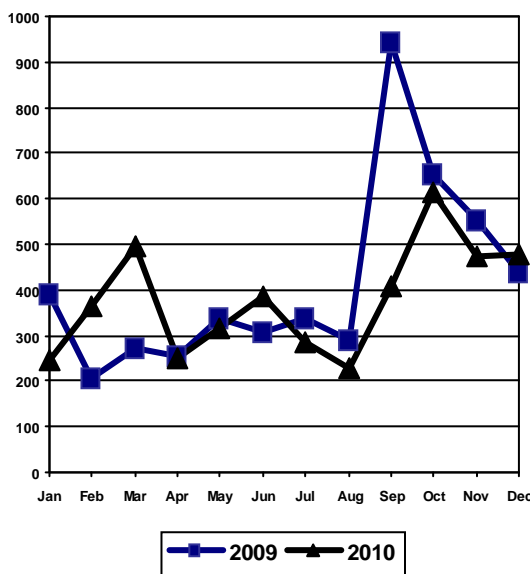


LEPTOSPIROSIS SURVEILLANCE REPORT 2010

Leptospirosis notifications in 2010 were seen at high endemic levels similar to the year 2009. However, a small reduction (around 8%) in notifications was seen in 2010 in comparison to 2009. The trends in notification of Leptospirosis cases in 2010 are compared with 2009 in the following graph.

Graph 1: Trends in Leptospirosis 2009 and 2010 in Sri Lanka

As shown in the above graph, in 2010, the peak



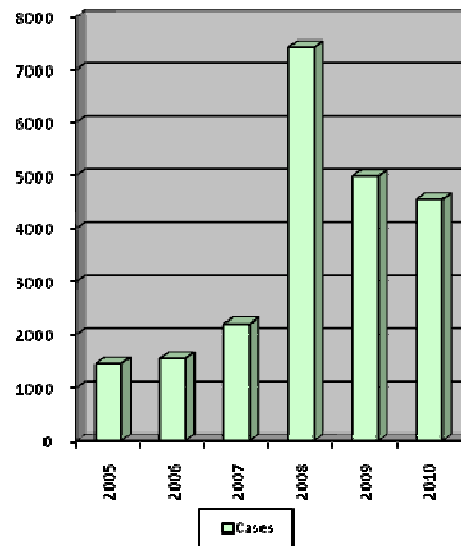
occurring in September-November period (which coincides with the 'Maha' paddy cultivation period) is of a lesser magnitude than in 2009.

Table 23: Morbidity and Mortality due to Leptospirosis 2005 – 2010

Year	No of Cases	No of Deaths	C F R (%)
2005	1447	33	2.2
2006	1550	40	2.5
2007	2198	34	1.5
2008	7423	207	2.7
2009	4980	145	2.9
2010	4545	123	2.7

As seen in the Table 23, the case fatality rate for Leptospirosis has remained 1.5% to 3.0% during the last six years. Higher case fatality rates of 2.7% and 2.9% are seen in the last few years (2008 – 2010), as compared to 2005, 2006 and 2007, when the CFR was 2.2, 2.5 and 1.5 respectively.

Graph 2: Leptospirosis notifications from 2005 - 2010



As presented in Graph 2, there has been an increased reporting of Leptospirosis from year 2008 onwards. Prior to 2008, the notification of Leptospirosis cases for a year was approximately 1500 – 2500 cases. However, from the year 2008 onwards the notification of cases remains high with over 4500 cases reported each year. In comparison to 2009, there is a slight reduction (around 10%) of cases and deaths in 2010. In spite of the reduction, Leptospirosis notifications still remain high with 4545 cases and 123 deaths notified to the Epidemiology Unit in the year 2010.

Table 24

SUMMARY OF NOTIFIABLE DISEASES - 4th QUARTER 2010

Health Region	Dysentery	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Measles	Simple continued Fever	Tetanus	Typhus Fever	Viral Hepatitis	Whooping Cough	Dengue Fever/Dengue Haemorrhagic Fever	Rubella	Chickenpox	Mumps	Meningitis	Leishmaniasis
Colombo	67	2	105	27	0	150	2	0	1	1	19	0	510	0	76	42	13	1
Gampaha	71	5	29	7	2	234	0	0	0	4	41	0	265	0	34	8	17	1
Kalutara	57	2	23	18	2	136	2	1	0	3	10	0	98	0	90	13	34	0
Kandy	92	2	10	1	0	104	0	0	0	29	39	0	102	55	30	18	1	0
Matale	49	2	6	10	0	59	0	0	2	2	11	0	85	0	17	15	8	1
Nuwara-Eliya	44	1	18	5	0	13	1	2	0	20	18	1	30	1	8	5	0	1
Galle	29	3	9	42	2	109	1	2	0	7	12	0	67	0	61	14	13	0
Hambantota	34	0	1	5	0	34	0	5	0	11	7	2	41	0	10	3	3	58
Matara	18	0	6	4	1	97	0	2	1	19	5	0	49	0	42	16	2	14
Jaffna	92	8	169	2	0	0	1	0	0	49	37	0	278	0	3	8	1	0
Kilinochchi	8	0	2	0	2	0	0	0	0	0	0	0	13	0	0	1	0	0
Mannar	5	0	7	0	1	7	0	0	0	0	2	0	47	0	1	0	0	0
Vavuniya	17	0	5	3	1	1	0	0	0	0	3	1	10	0	5	0	0	1
Mullaitivu	22	0	6	0	1	8	0	0	0	0	0	0	5	0	1	0	1	0
Batticaloa	63	1	10	4	3	3	0	2	0	0	7	0	50	0	5	0	7	0
Ampara	37	0	2	0	0	4	0	1	0	1	4	0	14	0	22	5	1	1
Trincomalee	35	0	0	6	1	25	0	0	0	4	3	0	50	0	24	3	8	1
Kurunegala	150	3	42	28	1	137	2	12	0	11	31	2	94	1	72	67	53	9
Puttalam	182	2	9	2	0	14	0	0	0	10	3	0	101	0	35	2	6	0
Anuradhapura	110	0	6	9	1	50	1	0	0	7	12	0	99	0	49	15	39	55
Polonnaruwa	30	1	3	2	0	47	0	2	0	0	10	0	20	1	30	19	6	8
Badulla	63	0	35	6	0	22	0	5	1	35	25	0	109	0	30	10	8	0
Moneragala	38	1	21	3	0	18	0	27	0	30	26	0	116	0	20	19	4	1
Ratnapura	80	3	9	1	1	100	2	13	1	10	21	0	217	0	65	41	21	5
Kegalle	45	4	28	6	0	202	0	0	1	11	41	1	68	0	70	56	14	1
Kalmunai	80	0	6	0	0	0	0	1	0	0	2	0	48	0	17	0	6	0
Total	1518	40	567	191	19	1574	12	75	7	264	389	7	2586	58	817	380	266	158

No polio cases. (from AFP surveillance system).

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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:

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ON STATE SERVICE

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