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**SRI LANKA**

*Third*

*Quarter*

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## EPIDEMIOLOGY UNIT

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Epidemiology Unit  
Ministry of Health



## 1. POLIOMYELITIS

Eighteen (18) Acute Flaccid cases were notified to the Epidemiology Unit during the 3<sup>rd</sup> quarter 2014. This is lower compared to reported AFP cases of 28 during the 3<sup>rd</sup> quarter 2013. Reported number of AFP cases for the quarter is below the expected number of AFP cases per quarter of the annual surveillance target of 2:100,000 under 15 - year age population, which is 24 according to the current census survey population. The non-polio AFP rate for the third quarter of 2014 was 1.4:100,000 under 15 year age population.

### Notification of AFP Cases from Hospitals

All hospitals where Consultant Paediatricians are available, are considered as sentinel sites for AFP surveillance. A total of 69 sentinel sites are currently functioning and last updated in 2013. All sentinel sites are expected to report immediately on AFP case admissions to the Epidemiology Unit and to the Regional Epidemiologist of the respective area of patient's residence. Majority of the cases (72%) were notified from the sentinel site hospitals for AFP, the Lady Ridgeway Children's Hospital (LRH), Teaching Hospital (TH) Peradeniya and TH Karapitiya. Particulars of all hospitals which reported AFP cases are given below.

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

The highest number of cases (5) were reported from Galle district. The complete list of distribution of AFP cases according to the province, district and MOH area are given below. Table 02.

### Age and Sex Distribution of AFP Cases

Sex distribution of the cases were equal during the 3<sup>rd</sup> quarter 2014 and this was different compared to the trend reported during the 3<sup>rd</sup> quarter 2013 in which majority was (75%) of boys in the reported AFP cases.

Majority (66.7%) of cases were between 1-9 years during the 3<sup>rd</sup> quarter this year and the trend was more or less similar compared to the compatible quarter in the previous year.

The table 03 shows the age distribution in the 3<sup>rd</sup> quarter 2014.

**Table 01: Notification of AFP cases by sentinel hospitals - 3rd quarter 2014**

Hospital	No: of cases reported
LRH	9
T.H.Peradeniya	2
T.H.Karapitiya	2
G.H.Badulla	1
SBSCH	1
GH Kegalle	1
G.H.Nuwara Eliya	1
DGH Vavuniya	1
<b>Total</b>	<b>18</b>

### Seasonal Distribution of AFP Cases

Majority of AFP cases were reported during July-August (89%) with similar no of cases in each month. This is similar to the compatible quarter in 2013 which reported the highest proportion in the month of August

**Table 02: Geographical distribution of AFP cases 3rd quarter 2014**

Province	District	MOH Area	Number of AFP cases		
Western	Colombo	Maharagama	1		
		Padukka	1		
		Nugegoda	1		
		Gampaha	Divulapitiya	1	
		Southern	Galle	Bopepoddala	1
Hikkaduwa	1				
MC Galle	1				
Habaraduwa	1				
Imaduwa	1				
Central	Kandy	Manikhinna	1		
		Poojapitiya	1		
		Nawalapitiya	1		
		Nuwara Eliya	Mathurata	2	
		Sabaragamuwa	Ratnapura	Nivithigala	1
Kegalle	Dehiowita			1	
North Central	Anuradhapura			Horowpathana	1
		Uva	Badulla	Badulla	1
				<b>Total</b>	<b>18</b>

**Table 03. Distribution of AFP cases by Age**  
3rd quarter 2014

Age	Total
< 1 year old	1
1-4 year old	4
5-9 year old	8
10-15 year old	5
<b>Total</b>	<b>18</b>

#### Final diagnoses of AFP cases

Majority (61%) of the reported AFP cases were Guillain Barre Syndrome (GBS) and diagnoses of all 18 cases of AFP are given in Table 04.

**Table 04: Final diagnoses of AFP patients reported during 3rd quarter 2014**

Final Diagnoses	Frequency
<b>GBS</b>	11
<b>Encephalomyelitis</b>	02
<b>Facial Nerve Palsy</b>	01
<b>Brain Stem Encephalitis</b>	01
<b>Transverse Myelitis</b>	01
<b>Radiculopathy</b>	01
<b>Myalgia</b>	01
<b>Total</b>	<b>18</b>

#### Laboratory exclusion of poliomyelitis in AFP patients

Two stool samples collected within 14 days of onset of paralysis are required at the Virology laboratory (Medical Research Institute, WHO regional reference laboratory) for exclusion of polio virus. 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 be completed to make the samples of 'good condition'.

Out of all cases 12 AFP cases (67%) had both stool samples collected timely and sent to MRI for polio virology.

## 2. MEASLES

Seven hundred and fourteen (714) suspected measles patients were reported during the third quarter 2014 in showing evidence of declining the outbreak situation started since January 2013. Five hundred and forty four (544) of them were clinically confirmed as measles as compatible with clinical surveillance case definition of "fever and maculopapular rash with one of the signs of cough, coryza or conjunctivitis".

Suspected measles for the compatible quarter, in the previous year was 2103 and 1334 of them were clinically confirmed as measles. Of the clinical cases 77% were field investigated by the respective medical officers of health (MOH) of the patients' residential areas and special field investigation reports have been sent to the Epidemiology Unit. Western province reported highest proportion (28%) (Colombo 60%, Kalutara 35%, Gampaha 32%) followed by Southern province (20%) and North Western province (13%).

Out of the all field investigated clinically confirmed cases 69% were among below 1 year or above 28 years who were not due for measles vaccination. Only 5% were with a history of receiving at least a measles vaccine dose and the remaining the history was not known for measles vaccination.

Laboratory investigations of suspected measles or rubella patients (494) from July to September who were with fever and maculopapular rash with one of cough, coryza or conjunctivitis were investigated in the WHO accredited virology laboratory at the Medical Research Institute (MRI) and identified 388 cases were serology positive for Measles IgM antibodies. Outbreak of measles was considered as declining during the third quarter.

## 3. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 3th Quarter 2014. Last case of cholera was reported in the country in January 2003

## 4. LEPTOSPIROSIS

During the 3rd quarter 2014, 601 cases and 10 deaths (CFR 1.66 %) due to Leptospirosis were notified to the Epidemiology Unit compared to 509 cases and 5 deaths in the previous quarter and 788 cases and 14 deaths during corresponding quarter of 2013.

**Table 05: Selected characteristics of Leptospirosis patients (%) - 3rd quarter 2014**

Age Group	Sex	
	Male	Female
0-9 years	0.97	0.0
10-19 years	11.40	1.92
20-29 years	16.28	7.69
30-39 years	17.58	9.61
40-49 years	24.42	28.84
50-59 years	16.93	26.92
>60 years	9.44	21.15
<b>Total</b>	<b>100.00</b>	<b>100.00</b>

Source : Epidemiology Unit

### 5. HUMAN RABIES

Four cases of Human Rabies were notified to the Epidemiology Unit in the 3rd quarter 2014 compared to 12 cases in the previous quarter and 10 cases in the corresponding quarter of year 2013.

Among the notified cases, 4 were investigated and confirmed as Human Rabies. 01 was a female and 03 were males. The cases were reported from Ranapura, Kandy, Mulativu and Kalutara.

#### Animal Rabies

During this quarter, 162 dogs were reported positive for rabies, compared to 122 in the previous quarter and 159 positive in the same period in the last year. In addition the following animals were also reported positive; Cats-36, Cows-03, Domestic Ruminants-00

#### Rabies Control Activities

**Dog vaccination** - A total of 384499 dogs were immunized during the quarter under review when compared to 29798 in the previous quarter and 412547 in corresponding quarter of the last year.

#### Animal Birth control

**Chemical**- A total of 3428 female dogs were injected with birth control injections (Progesterone) during the quarter under review.

**Surgical**– 28812 female dogs were subjected to sterilization by surgical method during the quarter under review.

### 6. MALARIA

There were no indigenous malaria cases reported during the 3rd quarter of 2014.(Table 06 ) Last Indigenous case of malaria was reported in October 2012.

### 7. VIRAL HEPATITIS

In the 3<sup>rd</sup> quarter 2014, a total of 612 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 468 cases in the previous quarter and 603 cases in the corresponding quarter of 2013. Kegalle(154 cases) reported the highest number of cases followed by Rathnapura District (132 cases).

### 8. ENTERIC FEVER

In the 3<sup>rd</sup> quarter, a total of 190 cases of Enteric fever were reported to the Epidemiology Unit, compared to 194 cases in the previous quarter and 255 cases in the corresponding quarter of 2013. The district of Colombo (34) reported the highest number of cases, followed by Jaffna (27cases).

### 9. DYSENTERY

In the 3<sup>rd</sup> quarter, a total of 976 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 863 cases in the previous quarter and 1279 cases in the corresponding quarter of 2013. Jaffna (165 cases ) and Batticaloa (86 cases) reported the highest number of cases.

### 10. JAPANESE ENCEPHALITIS (JE)

During the 3<sup>rd</sup> quarter of 2014, 45 cases of clinically suspected Encephalitis cases were reported to the Epidemiology Unit through the routine disease notification system. Out of this, 33 cases were clinically confirmed by the Public Health Inspectors during their field investigations. During the 3<sup>rd</sup> quarter of 2014, MRI has reported 3 lab confirmed JE cases. These cases were reported from Gampaha (2) and Matale (1) districts. One case belonged to the age group less than one year and other two cases belonged to 1-10y age group.

### 11. TETANUS

Three cases of clinically confirmed tetanus were reported in the third quarter. Galewela, Kopay, Thanamalwila MOOH of RDHS areas of Matale, Jaffna and Moneragala respectively reported one case each.

### 12. RUBELLA AND CONGENITAL RUBELLA SYNDROME (CRS)

During the whole quarter 7 suspected Rubella disease cases were reported but none of them were confirmed as Rubella infection in field level investigation or by the laboratory investigations. No CRS cases were reported during the quarter and not detected at the laboratory during investigations of babies for TORCH screen.

**Table 06: Results of Blood smear examination for malaria parasites - 3rd quarter 2014**

	3rd quarter 2013	3rd quarter 2014
No. of blood smears	258,482	278,726
No. of positives	0	0
No. of P. vivax	0	0
No. of P. falciparum	0	0
No. of mixed infections	0	0
No. of infant positives	0	0
Slide positivity rate	0	0
P.v. : P.f. ratio	0	0
Percentage of infants	0	0

Source: Anti Malaria Campaign

**Table 08 : Distribution of number of blood smears examined by district RMO - 3rd quarter 2014**

RMO	July	Aug	Sep	Total
Colombo	6967	6196	7514	20677
Gampaha	4646	3416	2699	10761
Kalutara	1727	1453	2467	5647
Kandy	4537	4560	3820	12917
Matale	2716	2662	3045	8423
Nuwara Eliya	13	198	344	555
Galle	1723	1699	1842	5264
Matara	1708	1554	2042	5304
Hambantota	3494	2218	2160	7872
Jaffna	7536	6844	7508	21888
Kilinochchi	3894	3664	2975	10533
Vavuniya	4707	5001	4399	14107
Mannar	4418	3963	3966	12347
Mullaitivu	1581	1723	1269	4573
Batticaloa	5026	6210	4988	16224
Ampara	1865	1486	1887	5238
Kalmunei	3275	3938	4087	11300
Trincomalie	3091	2605	2632	8328
Kurunegala	5608	5230	6179	17017
Maho	1353	1357	2037	4747
Puttalam	2619	2326	2220	7165
Anuradhapura	6099	6585	6598	19282
Pollonnaruwa	5288	5033	4518	14839
Badulla	2045	3518	2886	8449
Monaragala	4302	2672	2182	9156
Rathnapura	2506	2473	2281	7260
Kegalle	2437	3422	2994	8853
<b>Total</b>	<b>95181</b>	<b>92006</b>	<b>91539</b>	<b>278726</b>

Source: Anti Malaria Campaign

**Table 07: Selected characteristics of confirmed cases of JE – 3rd quarter 2014**

Sex	Male	00 (00%)
	Female	03 (100%)
Age group	< 1 Y	01 (33%)
	1-10 Y	02 (67%)
	11-20 Y	00 (00%)
	21-50 Y	00 (00%)
	> 50 Y	00 (00%)
District	Gampaha	02 (67%)
	Matale	01 (33%)

**Table 09 : Morbidity and mortality due to DF/DHF - 3rd quarter 2014**

RDHS Division	Cases	Percentage (%)	Deaths
Colombo	3669	29.60	06
Gampaha	2273	18.35	06
Kalutara	766	6.18	00
Kandy	646	5.21	02
Matale	157	1.26	00
N' Eliya	91	0.73	00
Galle	375	3.02	00
Hambantota	234	1.88	00
Matara	287	2.31	00
Jaffna	366	2.95	00
Kilinochchi	15	0.12	00
Mannar	63	0.50	00
Vavuniya	25	0.20	00
Mulativu	17	0.13	00
Batticaloa	97	0.78	00
Ampara	39	0.31	00
Trincomalee	68	0.54	00
Kurunagala	809	6.50	03
Puttalam	205	1.65	01
A'pura	153	1.23	00
Polonnaruwa	139	1.10	00
Badulla	239	1.90	01
Moneragala	100	0.80	00
Ratnapura	948	7.60	05
Kegalle	562	4.50	00
Kalmunai	40	0.32	00
<b>Total</b>	<b>12,383</b>	<b>100.00</b>	<b>24</b>



**Table 10 : DF/DHF statistics from Department of virology, MRI –3rd quarter 2014**

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
July	523	278
Aug	363	168
Sep	312	155
<b>Total</b>	<b>1198</b>	<b>601</b>

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

During the 3<sup>rd</sup> Quarter of 2014, 12383 cases of DF/DHF and 24 deaths were reported (0.19% CFR) when compared to 12710 cases of DF/DHF and 38 deaths (0.29 % CFR) reported during the 2<sup>nd</sup> Quarter of 2014. Proportion of cases notified in July, August and September were 46.20%, 32.48%, and 21.32% respectively. Table 09 shows the distribution of DF/DHF cases and deaths in the RDHS divisions during the 3<sup>rd</sup> quarter of 2014.

Special surveillance data on 1132 confirmed cases were received and analyzed for the 3<sup>rd</sup> quarter of 2014. Age distribution of reported cases were <4 years of age in 63 (5.50%), 5- 9 years of age in 89(7.80%), 10 - 14 years of age in 100 (8.80%), 15 – 19 years of age in 107 (9.40%), 20 - 24 years of age in 196 (17.30%), 25 - 29 years of age in 145 (12.80%), 30 - 34 years of age in 105 (9.27%), 35 - 39 years of age in 78 (6.80%), 40 - 44 years of age in 60 (5.30%), 45 - 49 years of age in 59 (5.21%), 50 – 54 years of age in 38 (3.35%), 55 - 59 years of age in 35 (3.09%), >60 years of age in 46 (4.06%) .

According to the clinical findings majority of the reported cases 1055 (93.36%) were classified as dengue fever, 6.10% were classified as Dengue haemorrhagic fever without shock , 0.176% were Dengue haemorrhagic fever with shock while 0.088% falling into unusual dengue category.

During the 3<sup>rd</sup> Quarter of 2014, 1198 blood samples were tested using IgM capture ELISA test at the Department of Virology, MRI. From the total, 601 (50.16%) samples were confirmed as positive (Table 10).

### 14. TUBERCULOSIS

A total of 2506 TB patients were notified to the NPTCCD by H816A, and 2449 patients were registered at chest clinics for the 3<sup>rd</sup> Quarter 2014. Out of this 2449 TB patients, 2245 (91.7%) were New TB Cases, 118 (4.8%) were Re-treatment Cases and 86 (3.5%) were Other Cases. Out of New TB cases 1140 (50.8%) were New Smear Positive TB, 484 (21.6%) were New Smear Negative TB and 621 (27.7%) were New Extra Pulmonary TB Cases. A total of 1926 TB patients were screened for HIV, out of them Eight patients were found positive. Three Multi Drug Resistant TB patients were detected during above quarter. Distribution of TB Patients by RDHS division is given in the Table 11.

**Table 11: Tuberculosis Patients by RDHS divisions - 3rd quarter 2014**

RDHS DIVISION	New				Retreatment & other	Total
	PTB sp+ve	PTB sp-ve	EPTB	Total		
Colombo	302	95	149	546	77	623
Gampaha	146	58	73	277	22	299
Kalutara	81	25	53	159	12	171
Kandy	64	47	62	173	14	187
Matale	19	08	12	39	02	41
Nuwara Eliya	23	10	14	47	03	50
Galle	49	30	25	104	03	107
Matara	39	18	26	83	03	86
Hambantota	15	07	16	38	00	38
Jaffna	20	11	15	46	05	51
Vavuniya	10	04	00	14	01	15
Batticaloa	31	12	13	56	06	62
Ampara	06	04	02	12	03	15
Kalmunai	17	10	05	32	03	35
Trincomalee	12	06	08	26	04	30
Kurunegala	64	46	31	141	24	165
Puttalam	22	07	14	43	00	43
Anuradhapura	37	05	11	53	04	57
Polonnaruwa	25	07	07	39	02	41
Badulla	35	11	11	57	04	61
Monaragala	10	06	04	20	00	20
Rathnapura	55	31	43	129	06	135
Kegalle	46	20	17	83	04	87
Mannar	06	01	06	13	02	15
Mulathivu	04	03	01	08	00	08
Kilinochchi	02	02	03	07	00	07
<b>Total</b>	<b>1140</b>	<b>484</b>	<b>621</b>	<b>2245</b>	<b>204</b>	<b>2449</b>

PTB-Pulmonary Tuberculosis

EPTB- Extra Pulmonary Tuberculosis

SP + ve - Sputum Positive

SP – ve - Sputum Negative

Data from Central TB Register

Source - National TB Register

## 15. SURVEILLANCE REPORT ON AEFI

Surveillance of Adverse Events Following Immunization (AEFI) effectively continued in the 3<sup>rd</sup> Quarter of 2014 has reached 94.0% of completeness of reports, while only 32.7% reports were received in time at the Epidemiology Unit. Badulla, Mannar, Matara, Monaragala, Mullaitivu, Ratnapura and Vavuniya were able to send all reports. The best timeliness was reported from the Gampaha district (56.8%) followed by Monaragala(51.5%), and Kegalle (50.0%).(Table 11) Overall performance of timeliness of monthly AEFI surveillance reports has dropped and needs more attention by Medical Officers of Health.

The highest percentage of nil reports were received from Ampara(60.0%), while for the country it was 38.7%. Jaffna district has the lowest 'Nil return' of 8.6%, followed by Kilinochchi(11.1%) indicating the good surveillance system in place. The highest rate (469.6 per 100,000 immunizations) of AEFI was reported from Jaffna district, while Colombo reported the highest number of 189 AEFI cases in the third quarter 2014.

For the third quarter, the highest number of AEFI (n=1016) was reported against Pentavalent vaccine, where as the highest rate of AEFI (546.4/100,000 doses administered) was reported against DTP vaccine. The rate of AEFI for Pentavalent (01<sup>st</sup>, 02<sup>nd</sup> & 03<sup>rd</sup> dose) is 391.4 per 100,000 doses administered. High Fever (660), Nodule (282) and Allergic Reaction (280) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (380 cases: 146.4 per 100,000 doses administered) and DTP (204 cases: 238.2 per 100,000 doses administered) vaccines. For Allergic reactions, it was largely due to PVV (74 cases: 28.5 per 100,000 doses administered), DTP (63 cases; 73.6 per 100,000 doses administered) and LJE (56 cases: 41 per 100,000 doses administered). Highest numbers of cases with nodules reported were following Pentavalent (219 cases: 84.4 per 100,000 doses administered). There were 3 cases of HHE reported following Pentavalent vaccine, but the reported rates of 1.3 per 100,000 doses have not exceeded the expected rates of HHE for Pentavalent vaccine.

**Table 12 : Completeness and timeliness of monthly reporting and receipt of "NIL" reports of AEFI by RDHS divisions - 3rd quarter 2014**

DPDHS	completeness %	Timely returns %	Nil Returns %	No. of AEFI	AEFI Rate (100,000 vaccine doses)
Colombo	94.1	47.9	33.3	189	148.0
Gampaha	97.8	56.8	38.6	80	61.4
Kalutara	87.2	14.7	38.2	56	72.7
Kandy	90.3	30.8	49.2	117	108.9
Matale	94.9	45.9	45.9	53	136.5
Nuwara Eliya	87.2	32.4	35.3	75	128.6
Galle	95.0	31.6	52.6	54	85.3
Hambantota	97.2	14.3	40.0	92	193.2
Matara	100.0	49.0	31.4	72	132.3
Jaffna	97.2	25.7	8.6	156	469.6
Kilinochchi	75.0	11.1	11.1	22	289.0
Mannar	100.0	6.7	53.3	16	219.6
Vavuniya	100.0	8.3	58.3	17	139.4
Mullaitivu	100.0	0.0	50.0	19	257.9
Batticaloa	97.6	41.5	36.6	84	220.3
Ampara	71.4	20.0	60.0	7	37.1
Trincomalee	97.0	21.9	15.6	73	229.2
Kurunegala	96.3	46.2	34.6	157	146.1
Puttalam	88.9	12.5	56.3	31	53.6
Anuradhapura	80.7	10.9	32.6	83	122.1
Polonnaruwa	95.2	25.0	45.0	34	112.4
Badulla	100.0	45.8	31.3	140	204.0
Moneragala	100.0	51.5	39.4	54	149.7
Ratnapura	100.0	13.0	50.0	68	92.9
Kegalle	97.0	50.0	21.9	71	90.1
Kalmunai	94.9	35.1	48.6	44	133.4
<b>Sri Lanka</b>	<b>94.0</b>	<b>32.7</b>	<b>38.7</b>	<b>1864</b>	<b>131.8</b>

Table 13: Number of Selected Adverse Events by Vaccines – 3rd quarter 2014

	BCG	OPV	PVV	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI reported
<b>Total Number of AEFI Reported</b>	06		1016	468	115	109	92	17	27	<b>1850</b>
<b>AEFI reporting rate/100,000 doses administered</b>	7.4		391.4	546.4	60.7	79.8	103.6	21.5	43.3	
<b>High Fever (&gt;39°C)</b>	2		380	204	28	28	17		01	<b>660</b>
<b>Reporting rate/100,000 doses administered</b>	2.5		146.4	238.2	14.8	21.8	20.5		1.6	
<b>Allergic reactions</b>			74	63	56	56	18	08	05	<b>280</b>
<b>Reporting rate/100,000 doses administered</b>			28.5	73.6	29.5	41.0	20.3	10.1	8.0	
<b>Severe local reactions</b>			66	22	05	02	05			<b>100</b>
<b>Reporting rate/100,000 doses administered</b>			25.4	25.7	2.6	1.5	5.6			
<b>Seizure (Febrile/Afebrile)</b>			16	20	02	4.0				<b>42</b>
<b>Reporting rate/100,000 doses administered</b>			6.2	23.3	1.1	2.9				
<b>Nodules</b>			219	50	04	02	05		02	<b>282</b>
<b>Reporting rate/100,000 doses administered</b>			84.54	58.4	2.1	3.2	5.6		3.2	
<b>Injection site abscess</b>	4		100	19	1	1	7		2	<b>134</b>
<b>Reporting rate/100,000 doses administered</b>	4.9		38.5	22.2	0.5	0.7	7.9		3.2	
<b>HHE</b>			3							<b>03</b>
<b>Reporting rate/100,000 doses administered</b>			1.2							

Note: The total number of AEFI reported in monthly returns include all vaccines in use, where as this table shows only selected vaccines. Therefore the total numbers of AEFI in these two tables are not the same.



**16. SURVEILLANCE AT SEA PORT**

Details of the vaccinations carried out by the Assistant Port Health Office during the 3rd quarter 2014, is as follows;

		Total
A.	Yellow fever	1150
B.	Meningococcal meningitis	276
C.	Oral polio	195

**17. SURVEILLANCE AT AIRPORT**

Surveillance activities carried out at the International Airport, Katunayake during the 3rd Quarter 2014 is given below.

**1. Yellow Fever Surveillance**

a. No. with valid certificate	-	252
b. No. without valid certificate & Deported	-	00
c. No. without valid certificate & Isolated	-	00

**2. Disinsection of Aircrafts**

a No. of flights arrived	-	7131
b No. of flights has to be disinsected	-	5151
c No. of flights disinsected	-	4814

**3. Passenger Arrivals & departures**

a No. Of passengers Arrived	-	970160
b No.of Passengers Departures	-	—

**4. Release of Human Remains**

a. No. of human Remains released	-	108
b. No. of released to J.M.O. For post-mortern	-	07
c. No. Alleged suicide	-	03

**5 Surveillance of other infectious diseases****6 Airport Sanitation**

a No of sanitary inspections carried out including Food establishment	-	14
b No. Of food samples taken under Food Act	-	00
c No. Found defective	-	00
d No. of court cases / prosecuted / Warned	-	00

**7 Other Health Activities**

a Polio Vaccination No - of doses given	-	00
b Health talk given to staff	-	14
<b>8</b> a. No. of water samples taken for Bacteriological Analysis	-	03
b. No. Reported Contaminated	-	00

**18. BACTERIOLOGY REPORT, MEDICAL RESEARCH INSTITUTE****Table 14**

	JUL	AUG	SEP
<b>(A) CHOLERA</b>			
No. of stool specimens Examined	144	119	59
No. of positives	0	0	0
<b>(B) SALMONELLA</b>			
No of blood specimens examined			
S.typhi			
S.paratyphi A			
No of stools specimens examined	164	131	88
S.typhi	0	0	0
S.paratyphi A	0	0	0
Others	7	1	5
<b>(C) SHIGELLA</b>			
No of stool specimens examined	164	131	88
Sh.sonnei	0	0	0
Sh.flexneri 1	0	0	0
Sh.flexneri 2	0	0	0
Sh.flexneri 3	0	0	0
Sh.flexneri 4	0	0	0
Sh.flexneri 5	0	0	0
Sh.flexneri 6	0	0	0
<b>(D) ENTERO PATHOGENIC E.COLI</b>			
No of stool specimens examined	1	3	2
No of positive	0	0	0
<b>(E) CAMPYLOBACTER</b>			
No of stool specimens examined	17	12	35
No of Positives	0	0	0
<b>(F) ISOLATES</b>			
Clinical	11	15	17
S. Typhi	0	1	0
S. Paratyphi A	0	1	0
Other Salmonella	5	2	7
Shigella spp	0	1	1

## 19. LEPROSY

Table 15: quarterly return of Leprosy statistics –3rd quarter 2014

## 1. National

	At the end of the quarter			Cumulative for end of the quarter		
	3rd QTR,2014	3rd QTR,2013	Diff (%)	2014	2013	Diff (%)
<b>New patients detected</b>	558	502	11.15	1732	1554	11.45
<b>Children</b>	53	44	20.45	164	139	17.98
<b>Grade 2 Deformities</b>	36	31	16.12	136	102	33.33
<b>Multi-Bacillary</b>	272	261	4.21	843	770	9.48
<b>Females</b>	226	203	11.33	668	645	3.56

## 2. Districts

District	New patients	G2-Deformity	Children	MB	Females
<b>Central</b>	22	02	02	12	07
Kandy	16	01	01	08	05
Matale	05	01	01	03	02
Nuwara Eliya	01	00	00	01	00
<b>Eastern</b>	<b>59</b>	<b>05</b>	<b>12</b>	<b>19</b>	<b>31</b>
Ampara	09	01	01	02	05
Batticaloa	23	01	06	09	13
Kalmunai	24	02	05	07	11
Trincomalee	03	01	00	01	02
<b>Northern</b>	<b>24</b>	<b>00</b>	<b>04</b>	<b>15</b>	<b>10</b>
Jaffna	14	00	00	09	05
Mannar	01	00	00	01	00
Mulathivu	02	00	00	01	02
Vauniya	07	00	04	04	03
<b>North Central</b>	<b>48</b>	<b>04</b>	<b>03</b>	<b>23</b>	<b>14</b>
Anuradhapura	25	01	02	11	07
Pollonnaruwa	23	03	01	12	07
<b>North Western</b>	<b>47</b>	<b>08</b>	<b>04</b>	<b>24</b>	<b>15</b>
Kurunegala	27	05	01	15	10
Puttalam	20	03	03	09	05
<b>Sabaragamuwa</b>	<b>55</b>	<b>02</b>	<b>04</b>	<b>30</b>	<b>24</b>
Kegalle	13	01	02	10	04
Rathnapura	42	01	02	20	20
<b>Southern</b>	<b>80</b>	<b>02</b>	<b>03</b>	<b>38</b>	<b>26</b>
Galle	32	00	01	10	11
Hambanthota	21	01	00	14	07
Matara	27	01	02	14	08
<b>Uva</b>	<b>09</b>	<b>00</b>	<b>01</b>	<b>05</b>	<b>01</b>
Baddulla	05	00	01	02	00
Monaragala	04	00	00	03	01
<b>Western</b>	<b>214</b>	<b>13</b>	<b>20</b>	<b>106</b>	<b>98</b>
Colombo	108	08	11	54	50
Gampaha	61	04	06	35	24
Kalutara	45	01	03	17	24
<b>Sri Lanka</b>	<b>558</b>	<b>36</b>	<b>53</b>	<b>272</b>	<b>226</b>

Source : Anti Leprosy Campaign

## 20. SEXUALLY TRANSMITTED DISEASES

Table 16: New episodes of STD/HIV/AIDS reported or treated at STD clinics in Sri Lanka –3rd quarter 2014

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 <sup>1</sup>	43	16	59	113	48	161
AIDS	14	04	18	36	12	48
Early Syphilis <sup>2</sup>	55	22	77	134	56	190
Syphilis	213	108	321	601	313	914
Late Syphilis <sup>3</sup>						
Congenital Syphilis <sup>4</sup>	11	03	14	12	09	21
Gonorrhoea <sup>5</sup>	120	25	145	353	82	435
Ophthalmia Neonatorum <sup>6</sup>	00	00	00	01	01	02
Non specific cervicitis/urethritis	168	400	568	459	1088	1547
Chlamydial infection	00	00	00	00	00	00
Genital Herpes	357	429	786	968	1224	2192
Genital Warts	279	206	485	805	596	1401
Chancroid	00	00	00	02	00	02
Trichomoniasis	01	22	23	05	77	82
Candidiasis	219	365	584	634	1079	1713
Bacterial Vaginosis	00	334	334	02	892	894
Other sexually transmitted diseases <sup>7</sup>	104	32	136	317	97	414
Non venereal	1074	570	1644	2966	1556	4522

Source: NSACP

(Includes cases diagnosed and reported to the 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

<sup>1</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>4</sup> - Includes both early and late cases

<sup>5</sup> - Includes presumptive Gonorrhoea

<sup>6</sup> - Includes both gonococcal and chlamydial conjunctivitis in neonatal period

<sup>7</sup> - Includes Lymphogranuloma venerium, Granuloma inguinale, Molluscum contagiosum, Scabies, Tinea, Hepatitis B etc.

<sup>8</sup> - Number of STD clinic attendees who were not having sexually transmitted diseases.

## 21. SURVEILLANCE OF MENINGITIS–

### 3rd quarter 2014

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 3<sup>rd</sup> quarter 2014, 356 cases of suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this, 286 cases were clinically confirmed by the Public Health Inspectors during their field investigations. Highest number of meningitis cases were reported from the Kegalle district (31) followed by Badulla (29) and Kurunagalla (20) districts.

Thirty five percent of the clinically confirmed meningitis cases belonged to the age group less than one year, another 25% belonged to the age group 1-5 years and 19% belonged to age group 6 – 15 years. Sixty two percent of the clinically confirmed cases were males and 38% were females.

**Table 17: Summary findings for special investigations carried out for clinically confirmed cases of Meningitis from 1st January to 30th September 2014**

CSF Culture Report		
CSF Culture	Number	(%)
CSF results available	<b>166</b>	<b>45%</b>
• No Growth	<b>(155)</b>	
• Group B streptococci	<b>(08)</b>	
• Haemophilus influenza	<b>(02)</b>	
• Streptococcus Pneumoniae	<b>(01)</b>	
Culture results not known	<b>224</b>	<b>53%</b>
Not done	<b>07</b>	<b>02%</b>
<b>Total</b>	<b>398</b>	<b>100%</b>
Final outcome of the patient		
Outcome	Number	(%)
Cured	<b>373</b>	94%
Died	<b>08</b>	02%
Information not available	<b>17</b>	<b>04%</b>
<b>Total</b>	<b>398</b>	<b>100%</b>
Final Diagnosis (based on clinical and lab findings)		
Diagnosis	Number	(%)
Culture confirmed	11	03%
Probable bacterial meningitis	39	10%
Probable viral meningitis	32	08%
Suspected Meningitis	<b>317</b>	80%
<b>Total</b>	<b>398</b>	<b>100%</b>

## 22. INFLUENZA SURVEILLANCE

### Human Influenza surveillance

Human Influenza surveillance comprises of 2 components; **Influenza like illness (ILI) surveillance and Severe Acute Respiratory Infections (SARI) surveillance.** Epidemiological data are collected through 19 sentinel hospitals throughout the country. Respiratory samples are collected from 13 sentinel hospitals for ILI and 4 sentinel hospitals for SARI and are analyzed at the National Influenza Center (NIC), Medical Research Institute (MRI).

### Epidemiological Component

#### ILI Surveillance

In the 3rd quarter of year 2014, thirteen hospitals out of nineteen have reported with a reporting rate of 68.4%. Total number of ILI cases were 14609, which amounted to 1.29% of the total OPD visits (n=1 131 849). The highest number of ILI cases were reported from Teaching Hospital Anuradhapura (n=3153, 21.58%) and majority of the patients were in the age group 15 – 49 years (n=2623, 17.9%).

#### SARI Surveillance

A total of 724 SARI cases were reported for the 3rd quarter of 2014 from all 4 sentinel hospitals (Teaching Hospital Ragama, General Hospital Matara, Teaching Hospital, Peradeniya and Lady Ridgeway Hospital for children). Out of a total of 31,871 all hospital admissions during the quarter, 724(2.27%) were due to SARI. The highest number of SARI cases (n=245, 33.83%) were reported from the Lady Ridgeway Hospital.

### Laboratory Component

#### ILI Surveillance

A total of 203 ILI respiratory samples were received by the MRI from sentinel hospitals during the 3<sup>rd</sup> quarter of 2014; 62 samples in July, 41 in August and 100 in September. Teaching Hospital Anuradhapura had sent the highest number of samples (n=31), followed by General Hospital Badulla (n=29), Teaching Hospital Kurunegala (n=23), General Hospital Ratnapura (n=20) and General Hospital Nuwara Eliya (n=17), (Table 18). All ILI sentinel hospitals except General Hospital Vavuniya and General Hospital Ampara had sent samples within the quarter. Influenza A (H3N2) was the predominant circulating Influenza viral strain identified, followed by Respiratory Syncytial Virus (RSV) (Table 20).

**SARI Surveillance**

A total of 81 respiratory samples were sent to the MRI during the 3rd quarter of year 2014, by all four SARI sentinel hospitals. Lady Ridgeway Hospital for children had sent the highest number of samples (n=41) followed by General Hospital Matara (n=12) (Table 19). Influenza A(H3N2) was the predominant circulating Influenza viral strain identified, followed RSV (Table 21).

**Table 18: Shows the monthly performance of sentinel hospitals in the laboratory component of the ILI surveillance for the 3rd quarter of the year 2014.**

	July	Aug	Sep	Total
NHSL	10	05	10	25
CSTH	02	01	11	14
IDH	00	02	05	07
GH Nuwara Eliya	05	00	12	17
TH Karapitiya	03	05	06	14
TH Jaffna	01	00	00	01
TH Batticaloa	00	04	07	11
TH Kurunegala	08	05	10	23
GH Chilaw	00	00	05	05
TH Anuradhapura	06	10	15	31
GH Polonnaruwa	02	00	04	06
GH Badulla	15	04	10	29
GH Ratnapura	10	05	05	20
<b>Total</b>	<b>62</b>	<b>41</b>	<b>100</b>	<b>203</b>

Source: Epidemiology Unit

**Table 19: Monthly performance of sentinel hospital in the laboratory component of the SARI surveillance for the 3rd quarter of the year 2014**

Institution	July	Aug	Sep	Total
CNTH Ragama	12	05	03	20
TH Peradeniya	04	03	01	08
GH Matara	04	03	05	12
LRH	23	08	10	41
<b>Total</b>	<b>43</b>	<b>19</b>	<b>19</b>	<b>81</b>

Source: Epidemiology Unit

**Table 20: Types of Respiratory Viruses Isolated in ILI samples for the 3rd quarter of the year 2014**

Month	Total Tested	Influenza A	A (H1N1) pdm09	A(H3N2)	Untyped	Influenza B	RSV
July	62	4	0	3	0	0	5
Aug	41	1	0	2	0	0	3
Sep	100	4	1	3	0	1	0
<b>Total</b>	<b>203</b>	<b>9</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>8</b>

Source: NIC/MRI

**Table 21: Types of Respiratory Viruses Isolated in SARI Samples for the 3rd quarter of the year 2014**

Month	Total	Influenza A	A (H1N1) pdm09	A (H3N2)	Untyped	Influenza B	RSV
July	19	0	0	0	0	0	0
Aug	19	0	0	0	0	0	1
Sep	43	4	0	4	0	0	3
<b>Total</b>	<b>81</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>

Source: NIC/MRI

**Bird Influenza Surveillance**

Sri Lanka has been considered a high risk country for Avian Influenza because of its location in the South East Asian Region and due to the country's poultry industry with a considerable proportion of people engaged in backyard poultry. Also the country attracting over two hundred species of migratory birds every year in two migratory seasons is another risk factor that makes continuing bird influenza surveillance necessary. Bird surveillance is conducted by the Department of Animal Production and Health (DAPH) with serum samples collected from poultry farms on a monthly basis and fecal samples collected from migratory bird hotspots during the two migratory seasons. Fifteen fecal samples are collected from each bird hotspot, pooled in bottles with five samples in each and analyzed at the virology laboratory at Polgolla.

**Table 22: Animal samples collected by month and district for the 3rd quarter of the year 2014.**

Month	No. of samples		Districts samples were collected from
	Pooled	Serum	
July	583	505	Colombo, Gampaha, Vavunia, Puttalam, Hambantota, Trincomalee, Kalutara, Kandy
Aug	610	542	Colombo, Gampaha, Vavunia, Kegalle, Badulla, Jaffna, Trincomalee, Kurunegala.
Sep	600	666	Colombo, Gampaha, Puttalam, Kalutara, Kandy, Kurunegala, Anuradhapura.
<b>Total</b>	<b>1793</b>	<b>1713</b>	

Source: DAPH



## 23. SPECIAL REPORT

### Surveillance Report On Influenza

#### Annual Report - 2013

Pandemic/Avian Influenza preparedness activities began in the country in 2005 along the guidelines of the global Avian/Pandemic preparedness programme which aimed at preparing each country for an optimum response against a possible Avian Influenza pandemic. As part of these activities, influenza surveillance in birds and humans were initiated in Sri Lanka by the Department of Animal Production and Health (DAPH) of Ministry of Livestock Development and the Epidemiology Unit of Ministry of Health respectively. National Technical Committee for Avian/Pandemic Influenza Preparedness was formed with participation from the programme's different stakeholders as the supervisory body of the programme.

Influenza surveillance is one of the main activities of the national preparedness programme with an objective of detecting early warning of a possible pandemic by routinely monitoring of the circulating influenza viral patterns among humans and birds in the country.

Human Influenza surveillance comprises of 2 components; Influenza like illness (ILI) surveillance and Severe Acute Respiratory tract Infections (SARI) surveillance. ILI surveillance had been initiated in 20 sentinel hospitals although only 19 are presently functioning. These institutions have been selected considering their importance in geographical location and also in being a 'hot spot' for bird migration. For the laboratory component of surveillance they are expected to send up to ten samples per month from patients with ILI attending Out Patients Departments (OPD) to the National Influenza Centre (NIC) at Medical Research Institute (MRI). Infection Control Nursing Officer (ICNO) is responsible for this activity which supervised by the Microbiologist of the institution. Once ILI patients are diagnosed by the medical officers of the Out Patients Department (OPD), ICNO would collect specimens from randomly selected patients. For the epidemiological component, ICNO would collect information on the number of total OPD attendees and the number of ILI visits per day, consolidate this information into a weekly return and enter into the web based surveillance system.

SARI surveillance has been established in 4 hospitals in the country. For the laboratory component of surveillance these are expected to send up to 05 respiratory samples per month from inward patients admitted with severe acute respiratory tract infections, to the National Influenza Centre. In the epidemiology component, surveillance officers specially recruited for this task and the ICNO would collect 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 enter into the web based surveillance system. Details of each SARI patients identified are used to complete an individual case investigation form as well. These forms are also entered into the web based surveillance system.

#### Avian Influenza Surveillance

Sri Lanka has been considered a high risk country for Avian Influenza because of its location in the South East Asian region and due to the country's poultry industry with a considerable proportion of people engaged in backyard poultry. Also the country being a tropical island which attracts over two hundred species of migratory birds every year in two migratory seasons is another risk factor that necessitates continuing bird influenza surveillance. Bird surveillance is conducted by the DAPH with serum samples collected from poultry farms, wet markets, processing plants, pet birds and ducks on a monthly basis and fecal samples collected from migratory bird hotspots during the two migratory seasons where 15 fecal samples are collected from each bird hotspot, pooled in bottles with five samples in each and analyzed at the at the virology laboratory at Polgolla. 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).

This report summarizes progress of influenza surveillance activities in year 2013.

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

Under ILI laboratory surveillance a total of 2069 ILI samples were received from hospitals identified as sentinel surveillance sites during the year. Lady Ridgeway Children's Hospital (LRH) sent in the highest number of samples (231) with Teaching Hospital (TH) Kurunegala and General Hospital (GH) Ratnapura sending in over 180 samples. All sentinel hospitals from North and East except General Hospital Vavunia, sent in samples. There were 146 samples from Teaching Hospital Batticaloa, 19 from General Hospital Ampara and 37 from Teaching Hospital Jaffna. Table 23 below shows the performance of sentinel hospitals in the laboratory component of the surveillance programme in 2013.

These samples were processed at the Medical Research Institute (MRI) which is the National Influenza Centre (NIC) for the country. Influenza B remained the predominant influenza viral strain throughout the year with Influenza A (H3N2) and (H1N1pdm09) emerging strongly towards the beginning of the year. The second wave of the H1N1 pandemic subsided early in the year and Influenza A (H1N1pdm09) was occasionally isolated thereafter. Country's circulating influenza viral patterns matched the global circulating seasonal viral picture in 2013. Table 24 below shows the subtypes of influenza isolated from samples, in the laboratory component of human influenza surveillance by month during the year 2013.

**Table 23: Performance of sentinel hospitals in laboratory component of ILI surveillance - 2013**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
LRH	37	33	30	30	1	0	5	20	17	20	16	22	231
NHSL	16	10	10	4	0	0	0	5	14	13	05	17	94
CSTH	0	6	13	8	0	0	0	0	16	17	16	18	94
IDH	19	38	24	11	4	0	0	0	15	16	11	10	148
NCTH	14	14	14	27	1	0	5	10	21	20	15	15	156
TH Peradeniya	23	19	17	6	6	0	0	6	6	22	12	17	134
GH NuwaraEliya	13	6	12	17	2	0		3	5	12	12	06	88
TH Karapitiya	16	16	17	18	2	0	0	0	5	5	7	10	96
GH Matara	11	9	11	12	1	0	0	0	14	7	11	0	76
TH Jaffna	0	0	3	14	0	0	0	0	14	6	0	0	37
GH Vavuniya	0	0	0	0	0	0	0	0	0	0	0	0	0
GH Ampara	0	0	0	0	0	0		11	0	8	0	0	19
TH Batticaloa	10	28	16	18	0	0		11	10	20	20	13	146
TH Kurunegala	27	30	22	21	0	0	0	10	10	24	21	21	186
GH Chilaw	15	22	16	22	0	0	0	0	10	15	4	12	116
TH Anuradhapura	21	14	16	17	0	0	0	12	0	14	7	7	108
GH Polonnaruwa	15	25	14	14	4	0	0	0	0	4	5	2	83
GH Badulla	15	12	8	11	6	0	0	0	0	0	13	8	73
GH Ratnapura	27	15	20	15	5	0	0	21	21	25	10	25	184
<b>Total</b>	<b>279</b>	<b>297</b>	<b>263</b>	<b>265</b>	<b>32</b>	<b>0</b>	<b>10</b>	<b>109</b>	<b>178</b>	<b>248</b>	<b>185</b>	<b>203</b>	<b>2069</b>

(Source: NIC/MRI)

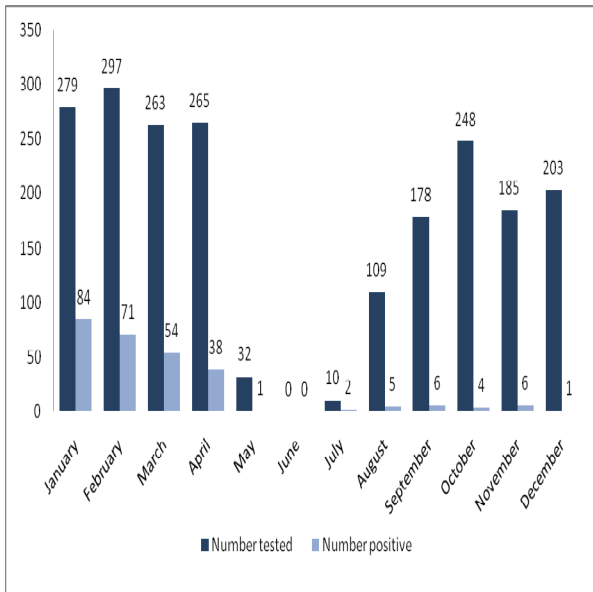
**Table 24: Types of Respiratory Viruses Isolated in ILI samples for the year 2013**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>Total Tested</b>	279	297	263	265	32	0	10	109	178	248	285	203	2069
<b>Influenza B</b>	17	45	39	14	1	-	1	4	1	0	0	0	122
<b>Influenza A (H3N2)</b>	37	14	5	3	0	-	0	0	2	0	2	0	63
<b>Influenza A(H1N1pdm)</b>	24	11	7	18	0	-	0	0	0	1	0	0	61
<b>Influenza A Untyped</b>	6	1	3	3	0	-	1	1	3	1	1	0	20
<b>Total tested positive</b>	84	71	54	38	01	-	02	05	06	02	03	0	266
<b>Proportion tested positive</b>	30.1	23.9	20.5	14.3	3.1	-	20	4.5	3.3	0.8	1.0	-	12.8%

(Source: NIC/MRI)

Laboratory surveillance findings shows that 13% of ILI samples tested within the year had an influenza viral strain. Figure 01 below shows the seasonal changes in the influenza positivity within the laboratory component of the surveillance programme in 2013.

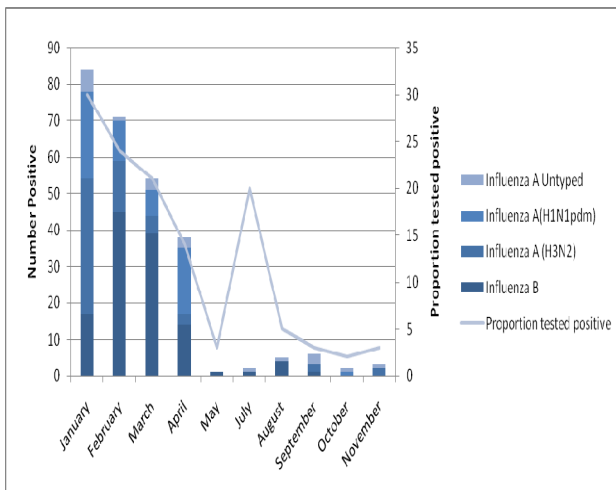
**Figure 01: Seasonal pattern in influenza positivity within the ILI surveillance laboratory component for the year 2013**



(Source: NIC/MRI)

Figure 02 below shows Influenza test positive samples according to the viral strain and the proportion tested positive

**Figure 02: Influenza test positive samples according to the viral strain and the positivity rate within the ILI surveillance laboratory component for the year 2013**



(Source: NIC/MRI)

This positivity rate shows two prominent peaks as expected. The higher peak is in the colder months towards the end of the year and the other peak is during May to July. Flu activity is higher during these two periods and that coincides with high influenza positivity

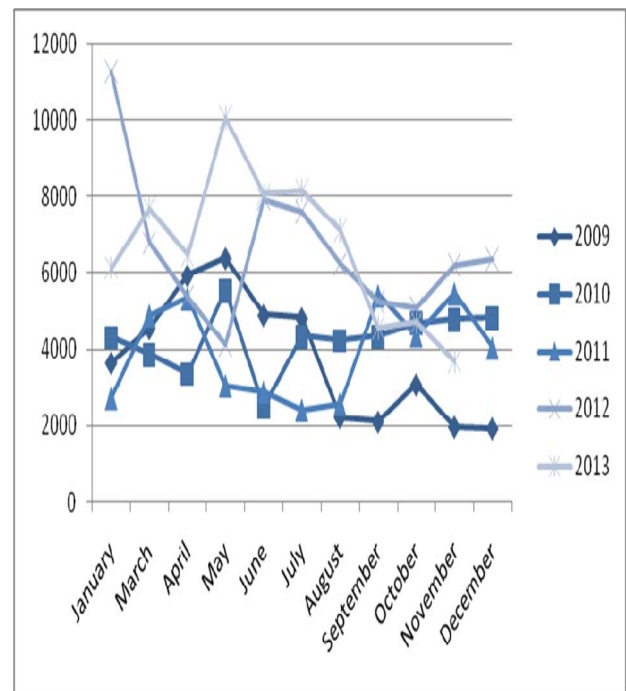
**ILI Surveillance – Epidemiological Component**

In year 2013 there were 84778 ILI cases visiting OPD of sentinel hospitals out of 4 148 119 total OPD visits. GH Ampara reported the highest number of ILI visits while GH Ratnapura, GH Nuwara Eliya, TH Batticaloa and TH Karapitiya also reported high numbers. However it was observed that there is lot of under reporting and low uniformity in reporting when these data were perused. Table 28 below shows the performance of sentinel hospitals in the epidemiological component of the surveillance programme in 2013.

In 2013, ILI had contributed to 2.1% of OPD visits. Although data obtained are underestimated the trend of the proportion of ILI out of total OPD visits, changes over the months of the year.

Figure 03 below shows the monthly distribution of the proportion of ILI in sentinel hospitals for the years 2009 to 2013.

**Figure 03: Distribution of Proportion of OPD ILI visits by month – from 2009 to 2013**



(Source: Epidemiology Unit/Ministry of Health)

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. Pandemic disrupted routine ILI surveillance activities and resulted in marked changes in healthcare seeking behaviours. Therefore seasonal trends cannot be detected with these years' data. 2011, 2012, 2013 were non-pandemic years and two influenza peaks can be seen in mid year and at the end of the year.

### Severe Acute Respiratory Infections (SARI) Surveillance

#### Laboratory Component

A total of 3414 samples from 4 SARI sentinel hospitals were received by the NIC/MRI for the year. LRH had sent in the highest number of samples (n=828). Low turnover can be observed in certain months due to various unforeseen circumstances. Table 25 below shows the performance of the 4 SARI sentinel hospitals in the laboratory component of the SARI surveillance for 2013.

**Table 25: Performance of sentinel hospitals in the laboratory component of the SARI surveillance – 2013**

Institution	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
LRH	31	42	65	48	84	25	30	30	22	23	26	24	450
GH Matara	0	0	16	19	96	14	5	20	13	17	0	3	203
TH Peradeniya	2	0	4	2	7	5	5	2	1	3	0	0	31
NCTH	-	-	4	26	44	10	4	13	19	8	12	4	24
<b>Total</b>	<b>33</b>	<b>42</b>	<b>89</b>	<b>95</b>	<b>231</b>	<b>54</b>	<b>44</b>	<b>65</b>	<b>55</b>	<b>51</b>	<b>38</b>	<b>31</b>	<b>708</b>

(Source: NIC/MRI)

Along with ILI samples, these SARI samples are processed at the NIC/MRI. Results of these samples tested in 2013 are shown in Table 26.

**Table 26: Types of Respiratory Viruses Isolated in SARI samples in the year 2013**

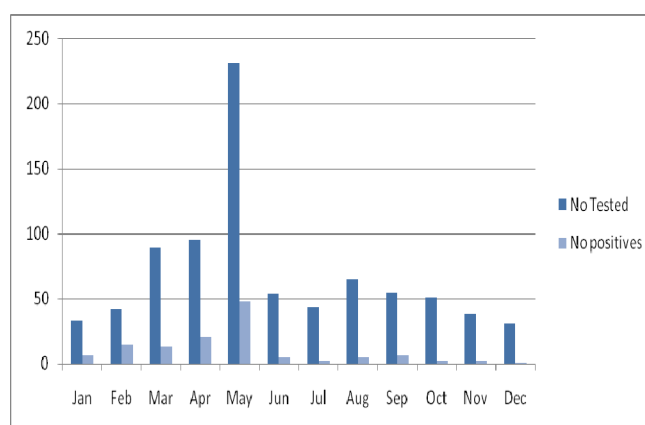
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>Total Tested</b>	33	42	89	95	231	54	44	65	55	51	38	31	828
<b>Influenza B</b>	1	6	8	7	25	3	0	5	2	2	1	0	60
<b>Influenza A (H3N2)</b>	3	7	0	5	0	0	0	0	2	0	1	1	19
<b>Influenza A(H1N1)pdm09</b>	2	2	5	8	23	2	2	0	2	0	0	0	46
<b>Total tested positive</b>	06	15	13	20	48	05	02	05	06	02	02	01	125
<b>Proportion tested positive</b>	18.2	35.7	14.6	21.1	20.8	09.3	04.5	07.7	10.9	03.9	05.3	03.2	15.1

(Source: NIC/MRI)

Similar to the pattern seen in ILI results, Influenza B was the predominant virus subtype observed in 2013. Influenza A (H1N1pdm09) was also seen at the beginning of the year, at the end of the second peak of the pandemic and also in mid year. Presence of Influenza A (H3N2) was observed at the beginning and towards the end of 2013.

Laboratory surveillance findings in SARI component show that 15.1% of SARI patients tested within this year as having an influenza viral strain. This figure from inward patients is much higher than the positivity rate obtained from ILI samples (2.1%). However the positivity rate over the months shows comparable changes. Figure 04 below shows the seasonal changes in the influenza positivity within the laboratory component of the SARI surveillance in 2013.

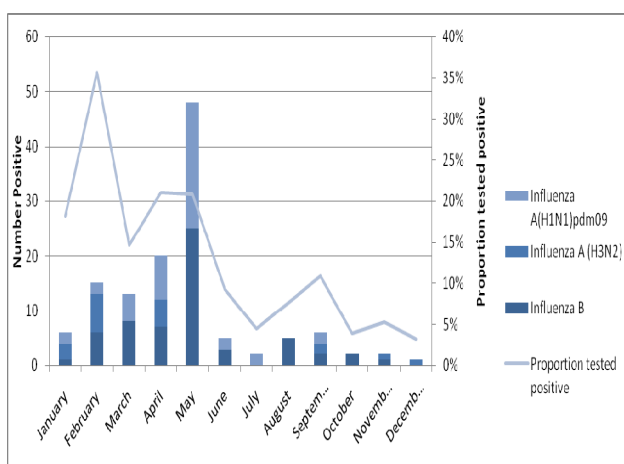
**Figure 04: Seasonal Pattern in influenza positivity within laboratory component of SARI surveillance during the year 2013**



(Source: NIC/MRI)

Figure 05 below shows Influenza test positive samples according to the viral strain and the proportion tested positive.

**Figure 05: Influenza test positive samples according to the viral strain and the positivity rate within the SARI surveillance laboratory component for the year 2013**



(Source: NIC/MRI)

**Table 27: Performance of sentinel hospitals in Epidemiological component of SARI surveillance for the year 2013**

Institution	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
LRH	87	153	202	138	95	127	165	91	85	82	51	0	1276
TH Peradeniya	0	0	0	0	0	0	0	11	50	37	41	0	139
GH Matara	0	0	128	156	164	143	75	88	30	49	9	0	842
CNTH Ragama	0	0	58	214	296	169	112	99	61	57	91	0	1157
<b>Total</b>	<b>87</b>	<b>153</b>	<b>388</b>	<b>508</b>	<b>555</b>	<b>439</b>	<b>352</b>	<b>289</b>	<b>226</b>	<b>225</b>	<b>192</b>	<b>0</b>	<b>3414</b>

(Source: Epidemiology Unit/Ministry of Health)

In year 2013 there had been 102 281 total admissions to these units at our 4 sentinel hospitals from which SARI cases are selected. Therefore SARI had contributed to 3.3% of total admissions in these units in 2013.

An increasing trend of disease activity can be clearly observed from a mid-year peak towards the end of the year. This compares well with influenza positivity. The high proportion seen in January may be due to the tail end of the second wave of the pandemic.

In comparison to ILI surveillance, this positivity rate shows an increasing trend towards the beginning of the year. There is a mid-year peak which ascends to a much higher peak towards the colder months at the end of the year. Flu activity is expected to be higher during these months with high influenza positivity.

#### Epidemiological Component

There were total of 3414 patients treated in ward for severe respiratory tract infections in the said 4 hospitals within 2013. The highest numbers (1276) were reported from LRH. There were wide under reporting in the latter part of the year. The highest number of patients were reported in May (n=555) and April (n=508). High numbers were seen between May – July.

Table 27 below shows the distribution of SARI patients in the 4 hospitals by month in 2013.

#### Animal Influenza Surveillance

In 2013 there were 7002 pooled samples and 8640 serum samples collected and tested at the VRI for HPAI. None of the samples had yielded HPAI. The following table 29 shows the number of samples collected by month and the districts they were collected from.



**Table 28: Performance of sentinel hospitals in Epidemiological component of ILI surveillance for the year 2013**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
TH Anuradapura	807	815	1093	976	1478	1146	904	1208	710	1063	0	0	10200
GH Badulla	90	120	133	85	83	67	34	49	36	30	0	0	727
GH Matara	363	977	810	846	740	851	861	951	724	708	0	0	7831
GH Rathanapura	1201	1507	1660	1514	2578	2267	2820	1714	0	0	0	0	15261
GH Nuwaraeliya	0	537	478	449	610	306	352	230	205	234	0	0	3401
TH Batticaloa	16	11	19	8	0	0	0	37	0	0	0	0	91
TH Kurunegala	131	183	102	125	519	166	171	183	139	168	0	0	1887
NHSL	22	3	0	0	0	0	0	0	0	0	0	0	25
TH Jaffna	0	0	0	0	0	0	0	0	0	0	0	0	0
TH Peradeniya	218	559	423	180	1058	509	281	321	387	587	0	0	4523
GH Chilaw	604	546	684	292	567	743	342	942	643	795	0	0	6158
TH Kalubovila	0	21	67	65	83	14	5	29	41	27	0	0	352
IDH	164	195	188	148	323	248	724	186	176	0	0	0	2352
LRH	383	383	407	390	503	414	459	478	375	311	0	0	4103
GH Ampara	1494	1295	1198	1098	1193	1054	860	558	972	658	0	0	10380
TH Ragama	8	3	23	20	0	0	0	17	28	20	0	0	119
GH Vavunia	0	0	0	0	0	0	0	0	0	0	0	0	0
TH Karapitiya	429	153	149	47	6	133	174	84	46	28	0	0	1249
SJGH	0	0	0	0	0	0	0	0	0	0	0	0	0
GH Polonnaruwa	209	384	259	222	340	147	173	80	88	77	0	0	1979
<b>Total</b>	<b>6139</b>	<b>7692</b>	<b>7693</b>	<b>6465</b>	<b>10081</b>	<b>8065</b>	<b>8160</b>	<b>7067</b>	<b>4570</b>	<b>4706</b>	<b>0</b>	<b>0</b>	<b>70638</b>

(Source: Epidemiology Unit/Ministry of Health)

**Table 29: Animal samples collected by month and district during the year 2013**

Month	No. of samples		Districts samples were collected from
	Pooled	Serum	
January	137	163	Routine quarantine samples
February	216	257	Colombo, Kurunegala, Puttalam, Badulla, Kandy, Jaffna
March	106	432	Colombo, Kurunegala, Matale, NuwaraEliya, Hambantota, Jaffna, Vavuniya
April	72	115	Colombo, Jaffna, Vavuniya, Badulla
May	160	661	Anuradhapura, Matale, Ratnapura, Badulla, Colombo, Hambantota, Jaffna, Matara, Kandy, Puttalam
June	175	620	Anuradhapura, Kurunegla, Ratnapura, Vavuniya, Polonnaruwa, Colombo, Jaffna
July	176	529	Anuradhapura, Gampaha, Kurunegala, Ampara, Trincomalee, NuwaraEliya, Ratnapura, Badulla, Colombo, Hambantota, Matara, Puttalam
August	304	1435	Gampaha, Jaffna, Trincomalee, Colombo, Puttalam
September	295	1420	Jaffna, Colombo, Kandy, Vavuniya, Badulla, Kegalle, Anuradhapura, Matara
October	471	1038	Colombo, Kandy, Ampara, Hambantota, Rathnapura, Polonnaruwa, Puttalam
November	532	1164	Colombo, Kandy, Matale, Kegalle, Rathnapura, Anuradhapura, Gampaha, Badulla, Vavuniya, Jaffna, Matara, Kurunegala
December	536	885	Colombo, Gampaha, Hambantota, Kegalle, Puttalam, Vavuniya, Jaffna
<b>Total</b>	<b>7002</b>	<b>8640</b>	

(Source: DAPH/Ministry of Livestock Development)

## 24. SUMMARY OF NOTIFIABLE DISEASES

Table 30

Health Region	Dysentery	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Measles	Simple Con. Fever	Tetanus	Typhus Fever	Viral Hepatitis	Whooping Cough	Dengue Fever /DHF	Tuberculosis	Chickenpox	Mumps	Meningitis	Leishmaniasis
Colombo	44	03	34	11	00	51	80	01	00	01	24	01	3669	161	76	04	23	00
Gampaha	21	06	10	14	00	101	80	01	00	11	92	01	2273	179	38	06	21	00
Kalutara	41	02	18	09	01	81	71	00	00	02	08	01	766	62	42	04	16	00
Kandy	25	02	08	12	01	23	40	04	00	24	66	02	646	202	30	11	07	02
Matale	22	01	06	11	00	10	02	01	01	00	14	00	157	33	14	04	25	01
Nuwara-Eliya	53	01	03	02	00	12	05	00	00	16	08	00	91	55	33	09	11	00
Galle	41	02	05	02	00	36	77	03	01	31	01	01	375	102	49	13	26	00
Hambantota	14	00	01	06	00	20	52	04	00	19	07	01	234	42	25	01	15	104
Matara	40	01	01	06	00	26	36	00	00	23	13	03	287	64	18	08	06	24
Jaffna	165	03	27	10	00	02	15	07	01	15	00	01	366	72	52	15	28	01
Kilinochchi	20	00	06	00	00	01	00	01	00	03	00	00	15	05	01	00	03	03
Mannar	07	00	06	00	00	00	01	00	00	04	00	00	63	15	02	00	02	02
Vavuniya	21	01	14	06	00	00	01	00	00	02	03	00	25	11	05	02	03	00
Mullaitivu	14	00	01	05	01	00	02	00	00	04	00	01	17	11	01	05	01	00
Batticaloa	86	01	10	13	00	02	13	02	00	01	00	01	97	67	14	02	02	00
Ampara	27	00	02	02	00	00	03	00	00	01	00	01	39	18	25	12	02	03
Trincomalee	14	00	03	06	00	06	14	03	00	08	00	00	68	33	30	04	10	02
Kurunegala	36	10	03	07	00	12	64	02	00	08	24	00	809	157	84	10	21	35
Puttalam	24	01	00	01	00	07	31	00	00	01	01	00	205	26	13	03	14	01
Anuradhapura	61	02	03	26	00	14	26	00	00	01	04	01	153	46	54	15	14	132
Polonnaruwa	15	00	00	01	00	17	10	01	00	03	01	03	139	42	20	03	07	21
Badulla	71	01	03	04	00	12	07	00	00	44	33	01	239	76	21	07	48	00
Moneragala	19	02	04	00	00	06	11	00	00	48	27	00	100	27	18	05	06	12
Ratnapura	42	05	09	05	01	111	49	00	00	26	132	05	948	132	22	04	15	07
Kegalle	17	01	12	00	00	51	23	00	00	13	154	01	562	95	61	11	28	01
Kalmunai	36	00	01	14	00	00	01	05	00	00	00	00	40	43	11	00	02	00
<b>Total</b>	<b>976</b>	<b>45</b>	<b>190</b>	<b>173</b>	<b>04</b>	<b>601</b>	<b>714</b>	<b>35</b>	<b>03</b>	<b>309</b>	<b>612</b>	<b>25</b>	<b>12383</b>	<b>1776</b>	<b>759</b>	<b>158</b>	<b>356</b>	<b>351</b>

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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