

EPIDEMIOLOGICAL BULLETIN**SRI LANKA***Third Quarter*
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1. POLIOMYELITIS

Ten (10) Acute Flaccid cases were notified to the Epidemiology Unit during the 3rd quarter, 2017. This is almost above the number of AFP cases of 18 during the 3rd quarter 2016. 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 2017 was 1.3:100,000 under 15 year age population.

Notification of AFP Cases from Hospitals

Availability of Clinicians in all hospitals considered as sentinel sites for AFP surveillance is vital. A total of 71 sentinel sites are currently functioning and last updated in 2016. All sentinel sites are expected to report immediately on AFP case admissions to the Epidemiology Unit and the Regional Epidemiologist of the respective area of patient's residence.

Majority of AFP cases (60%) were notified from Lady Ridgeway Children's Hospital (LRH) during the quarter. Number of AFP cases notified during the quarter is given below.

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

The higher number of cases (3) was reported from the Colombo district. The complete list of distribution of AFP cases according to province, district and MOH area are given below.

Seasonal Distribution of AFP Cases

Majority of AFP cases were reported during August (44%). There is no observable variation of case presentation by month compared to the compatible quarter in the previous year.

Age and Sex Distribution of AFP Cases

Majority of AFP cases (55.5%) were males during the 3rd quarter 2016. During the 3rd quarter, 2015 the trend was different with majority being females.

Table 01
Notification of AFP cases by sentinel hospitals 3rd Quarter 2017

Hospital	No: of cases reported
Lady Ridgeway Hospital	6
T.H.Anuradhapura	1
T.H.Kurunegala	1
TH Kandy	1
G.H.Polonnaruwa	1
Total	10

Table 02 : Geographical distribution of AFP cases

Province	District	MOH Area	Number of AFP cases	
Western	Colombo	Kahathuduwa	1	
		Kosgama	1	
		Maharagama	1	
Southern	Matara	Imaduwa	1	
		Welipitiya	1	
		Hambantota	Beliatta	1
Central	Kandy	Pujapitiya	1	
		Matale	Ukuwela	2
		Nuwareliya	Lindula	1
Sabaragamuwa	Kegalle	Warakapola	1	
		Rathnapura	Kolonna	1
North Western	Kurunegala	Mawathagama	1	
		Galgamuwa	1	
North Central	Anuradapura	NNP	1	
		Palagala	1	
Uva	Badulla	Kandaketiya	1	
Nothern	Mannar	Nananthan	1	
Total			18	

Majority (66.6%) of cases was between 1-9 years during the 3rd quarter this year and the trend was higher compared to the compatible quarter in the previous year.

The table below shows the age distribution in the 3rd quarter 2017.

Table 03. Distribution of AFP cases by Age 3rd Quarter 2017.

Age Group	Sex		Total
	Male	Female	
<1 year old	0	2	2
1-4 year old	2	4	6
5-9 year old	4	2	6
10-15 year old	4	0	4
Total	10	8	18

Final diagnoses of AFP cases

Majority (88.2%) of the reported AFP cases was Guillain Barre Syndrome (GBS) and diagnoses of all 18 cases of AFP are given in table 4.

Table 04: Final diagnoses of AFP patients reported during the 3rd quarter 2017.

Final Diagnoses	Frequency
GBS	13
Transversmyelitis	1
Paraspinal Tumor	1
Neuroblastoma	1
Transient Paralysis	1
Encephalitis	1
Total	18

Laboratory Surveillance of AFP Cases

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 AFP cases 16 (88.8%) had both stool samples collected timely and sent to MRI for polio virology.

352 suspected measles patients were reported during the third quarter 2017 and reported number of cases was same as the cases for the compatible quarter in the previous year(52). Out of these clinical cases compatible with clinical surveillance case definition of "fever and maculopapular rash with one of the signs of cough, coryza or conjunctivitis" 47 (90%) were laboratory tested and 0 were laboratory confirmed for measles.

2. MEASLES

Laboratory testing rate which was expected to achieve >80% has not been achieved during the quarter and non measles, non rubella rate was only 0.5/100,000 population, which was expected to achieve >2/100,000 population.

The outbreak situation started in 2013 was continuing and MMR vaccine schedule change has been decided based on sero survey findings of high susceptibility of infants due to possible early waning of maternal antibodies of immunized mothers. The first dose of MMR vaccination was brought down to 9 months of age while keeping the 2nd dose of MMR at 3 years. This change is expected to bring down the observed high transmission of measles among infants.

Out of the reported cases (52) during the quarter, case based field investigations have been conducted by relevant Medical Officers of Health in respective areas of patient's residence and 17 (32%) of special investigation forms have been received at the Epidemiology Unit.

Majority of affected were below 1 year (52%) and above 30 years of age (12%) indicating high transmission or the most susceptible in these age categories. But relatively high proportion of cases (4%) has been observed between 18-30 years among those who should have had at least 1 dose of measles vaccine at the age of 9 months as it has been added to the National Immunization Programme in 1984. On review of the total number of 2 cases of 18-30 years, declared they had not received the measles vaccination and were uncertain about measles vaccination. But of the tested cases for measles (4%) in this age category (15-30 years) not a single case had been laboratory confirmed.

Table 05: Measles case reporting according to the districts— 3rd quarter 2017

District	cases	District	cases
Colombo	16	Mannar	0
Gampaha	6	Batticaloa	0
Kalutara	3	Kalmunai	0
Kandy	2	Ampara	3
Matale	1	Trincomalee	0
Nuwara Eliya	1	Kurunegala	3
Galle	1	Puttalam	1
Hambantota	0	Anuradhapura	1
Matara	1	Polonnaruwa	1
Jaffna	2	Badulla	2
Vavuniya	0	Monaragala	0
Ratnapura	4	Kegalle	2

3. LEPTOSPIROSIS

During the 3rd Quarter 2017, 767 cases and 11 deaths (CFR 1.4 %) due to Leptospirosis were notified to the Epidemiology Unit compared to 777 cases and 9 deaths in the previous quarter and 823 cases and 8 deaths during the corresponding quarter of 2016.

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

Table 06: SELECTED CHARACTERISTICS OF LEPTOSPIROSIS PATIENTS(%)- 3rd QUARTER 2017.

Age Group	Sex	
	Male	Female
0 - 9 years	1.1	0.00
10 - 19 years	11.3	1.7
20 - 29years	17.2	8.6
30 - 39years	19.2	20.7
40 - 49years	20.1	17.2
50 - 59 years	17.5	31.0
>60years	13.6	20.7
Total	100.00	100.00

4. HUMAN RABIES

Four cases of Human Rabies were notified to the Epidemiology Unit in the 3rd quarter, 2017 compared to 06 cases in the previous quarter and 7 cases in the corresponding quarter of year 2016. The four notified cases have been confirmed.

Animal Rabies

During this quarter, 39 dogs were reported positive for rabies, compared to 110 in the previous quarter and 111 positive in the same period in the last year.

Rabies Control Activities

Dog vaccination - A total of 361269 dogs were vaccinated during the Quarter under review when compared to 317181 in the previous quarter and 452044 in corresponding Quarter of the last year.

Animal Birth control

Chemical- A total of 3458 female dogs were injected with birth control injections (Progesterone) during the quarter under review. **Surgical**- 34313 female dogs were subjected to sterilization by surgical method during the quarter under review.

5. VIRAL HEPATITIS

In the 3rd Quarter 2017, a total of 90 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 116 cases in the previous quarter and 301 cases in the corresponding quarter of 2016. Rathnapura district (19 cases) reported the highest number of cases followed by Badulla District (10 cases).

6. ENTERIC FEVER

In the 3rd Quarter 2017, a total of 118 cases of Enteric fever were reported to the Epidemiology Unit, compared to 77 cases in the previous quarter and 217 cases in the corresponding quarter of 2016. The district of Vavuniya (43 cases) reported the highest number of cases, followed by N'eliya and Galle (12 cases).

7. DYSENTERY

In the 3rd Quarter 2017, a total of 559 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 318 cases in the previous quarter and 1065 cases in the corresponding quarter of 2016. Jaffna district (127 cases) and Kalmunae (56 cases) reported the highest number of cases.

8. MALARIA

There were no indigenous malaria cases reported during the 3rd quarter of 2017.

9. JAPANESE ENCEPHALITIS SURVEILLANCE-3rd quarter 2017

During the 3rd quarter of 2017, 56 cases of clinically suspected Encephalitis cases were reported to the Epidemiology Unit through the routine disease notification system. Out of this, 37 cases were clinically confirmed by the Public Health Inspectors during their field investigations.

During the 3rd quarter of 2017, MRI has reported 3 lab confirmed JE cases. Out of these 2 confirmed JE cases, all (100%) were investigated by the MOH. Up to 3rd Quarter (Jan – Sep) 2017, MRI has reported altogether 25 lab confirmed JE cases

Among them, 10 (40%) were over 50 years of age, another 12 (48%) were between 21 -50 years, none was between 11 - 20 years, another 3 (12%) were 1-10 years while none were less than one year.

The highest number of confirmed JE cases (07) were reported from Ratnapura, and Galle (3) , Gampaha (3), Kalutara (2), Colombo(2), Matara (2) districts followed by (01 each) from Hambantota, Badulla, Matale and Anuradhpura districts. The majority of the confirmed JE cases had not been immunized

Table 08
SELECTED CHARACTERISTICS OF CONFIRMED
CASES OF JE— up to 3rd Quarter 2017

Sex	Male	16 (64%)
	Female	09 (36%)
Age group	< 1 y	00 (00%)
	1-10 y	03 (12%)
	11- 20	00 (00%)
	21-50Y	12 (48%)
	> 50 Y	10 (40%)
District	Ratnapura	08 (32%)
	Galle	03 (12%)
	Gampaha	03 (12%)
	Matara	02 (08%)
	Colombo	02 (08%)
	Kalutara	02 (08%)
	Matale	01 (04%)
	Hambantota	01 (04%)
	Badulla	01(04%)
	Anuradapura	01(04%)

Table 07
Results of Blood smear examination for malaria parasites - 3rd Quarter 2017

	3rd quarter 2016	3rd quarter 2017
No. of blood smears examined	265,229	269,329
No. of positives	0	0
No. of <i>P. vivax</i>	0	0
No. of <i>P. falciparum</i>	0	0
No. of mixed infections	0	0
No. of infant positives	0	0
Slide positivity rate (S.P.R.)	0.00	0.00
P.v. : P.f. ratio	0	0
Percentage of infant positives	0%	0

Table 09

DISTRIBUTION OF NUMBER OF BLOOD SMEARS EXAM-
INED BY DISTRICT RMO– 3RD QUARTER 2017

RMO	July	August	Sept.	Total
Colombo	6639	8425	6632	21696
Gampaha	4127	5220	4672	14019
Kalutara	1774	1543	1754	5071
Kandy	3812	4859	4263	12934
Matale	3300	2955	2508	8763
Nuwara Eliya	515	526	238	1279
Galle	1447	1613	1808	4868
Matara	1502	1405	664	3571
Hambantota	2408	3527	2161	8096
Jaffna	5796	6443	6515	18754
Kilinochchi	2205	1805	1669	5679
Vavuniya	2697	2521	2284	7502
Mannar	3379	3522	2432	9333
Mullaitivu	2336	2196	1751	6283
Batticaloa	5812	5679	5452	16943
Ampara	1925	2424	1743	6092
Kalmunei	3345	4036	3148	10,529
Trincomalie	2266	2494	2901	7661
Kurunegala	6473	5529	5799	17801
Maho	1459	1573	1686	4718
Puttalam	2761	3100	2869	8730
Anuradhapura	5525	4486	4398	14409
Pollonnaruwa	4242	3319	3737	11298
Badulla	3305	3720	2689	9714
Monaragala	4680	4590	3022	12292
Rathnapura	4138	3885	3549	11572
Kegalle	3288	3601	2833	9722
TOTAL	91156	94996	83177	269329

Table 10

MORBIDITY AND MORTALITY DUE TO
DF/DHF - 3RD QUARTER 2017

RDHS Division	Cases	Percentage (%)	Deaths	CFR
Colombo	12342	16.93	32	0.26
Gampaha	13838	18.98	38	0.27
Kalutara	4752	6.52	6	0.13
Kandy	7299	10.01	11	0.15
Matale	1467	2.01	4	0.27
N' Eliya	492	0.67	0	0.00
Galle	2318	3.18	4	0.17
Hambantota	1125	1.54	0	0.00
Matara	3221	4.42	7	0.22
Jaffna	1007	1.38	1	0.10
Kilinochchi	179	0.25	1	0.56
Mannar	31	0.04	0	0.00
Vavuniya	281	0.39	1	0.36
Mulativu	144	0.20	0	0.00
Batticaloa	613	0.84	0	0.00
Ampara	387	0.53	0	0.00
Trincomalee	321	0.44	0	0.00
Kurunagale	4363	5.98	5	0.11
Puttalam	2915	4.00	11	0.38
A'pura	1104	1.51	0	0.00
Polonnaruwa	478	0.66	0	0.00
Badulla	1983	2.72	4	0.20
Moneragala	1217	1.67	1	0.08
Ratnapura	5576	7.65	5	0.09
Kegalle	4981	6.83	12	0.24
Kalmunai	476	0.65	1	0.21
Total	72910	100.00	144	0.20

Table 11 -DHF STATISTICS FROM DEPARTMENT OF VIROLOGY, MRI—3RD QUARTER 2017

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
July	246	107 (43%)
August	270	100 (37%)
September	178	40 (22%)
Total	694	247 (35.6%)

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

During the 3rd quarter of 2017; 72,910 cases of DF/DHF were reported from all districts (Table 10) while 144 deaths were reported (CFR 0.20%) when compared to 53,641 cases of DF/DHF reported with 185 deaths (CFR 0.34%) during the 2nd quarter of 2017. Proportion of cases notified in July, August and September were 56.4%, 30.54% and 13.06% respectively. Table 10 shows the distribution of DF/DHF cases and deaths in the 3rd quarter of 2017.

Special surveillance data of confirmed cases were received and analyzed for the 3rd quarter of 2017. Age distribution of reported cases were 1.9% in <4 years age group, 8.3% in 5-9 years of age group, 9.1% in 10-14 years of age, 9.5% in 15–19 years of age, 14.5% in 20-24 years of age, 9.7% in 25-29 years of age, 8.5% in 30-34 years of age, 8.0% in 35-39 years of age, 6.6% in 40-44 years of age, 5.0% in 45-49 years of age, 5.7% in 50–54 years of age, 2.9% in 55-59 years of age and 5.7% in >60 years of age.

According to the Special surveillance data and on clinical findings, majority of the reported cases 86.8% were classified as dengue fever (DF) while 11.8% were classified as dengue Haemorrhagic fever (DHF).

During the 3rd quarter of 2017, 694 blood samples were tested using IgM capture ELISA test at the Department of Virology, Medical Research Institute (MRI) and 247 (35.6%) samples were confirmed as positive (Table 11).

11. RUBELLA AND CONGENITAL RUBELLA SYNDROME (CRS)

No rubella or CRS cases were reported during the quarter. Rubella IgM testing was carried out by the Virology Laboratory, MRI, for nearly 370 infants with any congenital abnormalities, maternal history of possible rubella or clinicians suspected of any maternal viral infection from samples sent for Rubella or TORCH screen and the positive Rubella IgM infants were traced. All were negative for rubella and no Congenital Rubella cases were detected.

12. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 3rd Quarter 2017. Last case of cholera was reported in the country in January 2003.

13. TETANUS

Six clinically confirmed tetanus cases were reported to the Epidemiology Unit during the 3rd quarter of 2017. These cases were from Mahara MOH area in the Gampaha district, Doluwa MOH area in the Kandy district, Nikaweratiya and Alawwa MOH areas in the Kurunegala district, Chennakalady MOH area in the Batticaloa district and Galnewa MOH area in the Anuradhapura district.

14. SURVEILLANCE REPORT ON AEFI

Surveillance of Adverse Events Following Immunization (AEFI) effectively continued in the 3rd Quarter of 2017 has reached 90.9% of completeness of reports, while 44.5% reports were received in time at the Epidemiology Unit indicating good compliance for the system by the MOOH. Colombo, Kalutara, Kandy, Matale , Galle , Hambantota ,Matura, Kilinochchi, Batticaloa, Ampara, Kurunegala, Puttalam, Anuradhapura,Polonnaruwa, Badulla, Moneragala, Rathnapura, Kegalle and Kalmunai districts were able to send all reports. The best timeliness was reported from the Jaffna district (87.8%) followed by Kilinochchi (75.0%) and Monaragala (66.7%). (Table 1)

The highest percentage of nil reports were received from Ampara (38.1%) followed by Kilinochchi district (33.3%), which were more than two fold of the Sri Lanka average (17.3%) indicating the need for more attention on surveillance from both MOH staff and hospitals. Polonnaruwa district has no 'Nil returns' followed by Jaffna district (2.4%) indicating the good surveillance system in place. The highest rate (594.2 per 100,000 immunizations) of AEFI was reported from the Jaffna district, while Kandy reported the highest number of AEFI cases(232) in the third quarter 2017.

For the third quarter, the highest number of AEFI (n=1515) was reported against Pentavalent vaccine, whereas the highest rate of AEFI (1316.6/100,000 doses administered) was reported against DTP vaccine. The rate of AEFI for Pentavalent (01st, 02nd & 03rd doses) is 654.3 per 100,000 doses administered. High Fever (956), Allergic Reaction (383), Nodule (628) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (522 cases: 225.4 per 100,000 doses administered) and DPT (361cases: 466.4 per 100,000 doses administered) vaccines. For Allergic reactions, it was largely due to DPT (150 cases: 193.8 per 100,000 doses administered) and PVV (124 cases: 53.5per 100,000 doses administered).

Table 12

COMPLETENESS AND TIMELINESS OF MONTHLY REPORTING AND RECEIPT OF "NIL" REPORTS OF AEFI BY RDHS DIVISIONS - 3RD QUARTER 2017

DPDHS	% completeness	% Timely returns	% Nil Returns	No. of AEFI	AEFI Rate (100,000 vaccine doses)
Colombo	100.0	54.9	5.9	219	154.1
Gampaha	97.8	22.7	15.9	166	119.5
Kalutara	100.0	42.9	16.7	118	142.9
Kandy	100.0	50.0	13.9	232	231.3
Matale	100.0	48.7	25.6	85	218.2
Nuwara Eliya	94.9	35.1	27.0	78	144.2
Galle	100.0	50.0	18.3	117	142.6
Hambantota	100.0	47.2	2.8	136	237.4
Matura	100.0	51.0	17.6	116	195.2
Jaffna	97.6	87.8	2.4	197	594.2
Kilinochchi	100.0	75.0	33.3	38	393.7
Mannar	93.3	50.0	28.6	53	554.7
Vavuniya	91.7	54.5	9.1	64	499.7
Mullativu	94.4	52.9	17.6	58	791.3
Batticaloa	100.0	35.7	21.4	83	172.6
Ampara	100.0	19.0	38.1	27	126.4
Trincomalee	91.7	54.5	18.2	85	205.4
Kurunegala	100.0	48.8	28.6	164	415.0
Puttalam	100.0	41.0	23.1	77	65.0
Anuradhapura	100.0	26.3	19.3	148	245.5
Polonnaruwa	100.0	14.3	0.0	97	127.3
Badulla	100.0	56.3	12.5	111	327.3
Moneragala	100.0	66.7	6.1	107	162.3
Rathnapura	100.0	25.9	18.5	144	355.2
Kegalle	100.0	54.5	9.1	86	108.2
Kalmunai	100.0	5.1	23.1	62	114.1
Sri Lanka	99.0	44.5	17.3	2868	190.2

Table 13 : Number of Selected Adverse Events by Vaccines – 3rd Quarter 2017

	BCG	OPV	PVV ¹	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI reported
Total Number AEFI Reported	8	1	1515	1019	136	71	57	13	15	2835
AEFI reporting rate/1,000,000 doses administered	10.0	0.2	654.3	1316.6	78.0	84.5	63.1	9.5	21.4	
High Fever (>39°C)	1		522	361	33	28	11			956
Reporting rate/1,000,000 doses administered	1.3		225.4	466.4	18.9	33.3	12.2			
Allergic reactions		1	124	150	58	22	15	9	4	383
Reporting rate/1,000,000 doses administered		0.2	53.5	193.8	33.3	26.2	16.6	6.6	5.1	
Severe local reactions			36	44	6	1	5	2		94
Reporting rate/1,000,000 doses administered			15.5	56.8	3.4	1.2	5.5	1.5		
Seizure (Febrile/Afebrile)			22	52	5	10				79
Reporting rate/1,000,000 doses administered			9.5	67.2	2.9	11.9				
Nodules	2		460	157	4		5			628
Reporting rate/1,000,000 doses administered	2.5		198.7	202.8	2.3		5.5			
Injection site abscess	4		137	22				1		164
Reporting rate/1,000,000 doses administered	5.0		59.2	28.4				0.7		
HHE				1			1			2
Reporting rate/1,000,000 doses administered				1.3			1.1			

1-PentaValent Vaccine

Note: Total given only for nine vaccines listed in the table

15. TUBERCULOSIS

A total of 2242 TB patients were notified to the NPTCCD by H816A (TB Notification Form) for the 3rd quarter 2017, while 2186 patients were registered at chest clinics during the same quarter according to the Quarterly Report on case finding (TB 08). Out of this 2242 TB patients 2048(93.7%) were new TB cases, 133 (6.0%) were re-treatment cases and five patients were identified for previous treatment history unknown category. Out of new TB cases, 1092 (53.3%) were bacteriologically confirmed TB, 394 (19.2%) were clinically diagnosed (sputum negative) TB and 562 (27.4%) were new extra-pulmonary TB cases.

Table 14: TB situation in the country—3rd quarter 2017

RDHS DIVISION	New				Retreat- ment & previous treat- ment history unknown	Total
	Bacte- riologically confirmed	Clinically diagnosed	EPTB	Total		
Colombo	254	89	131	474	50	524
Gampaha	131	66	38	235	14	249
Kalutara	63	18	52	133	6	139
Kandy	60	37	39	136	5	141
Matale	15	4	12	31	3	34
Nuwara Eliya	25	12	28	65	3	68
Galle	51	9	35	95	8	103
Matara	31	1	15	47	3	50
Hambantota	16	7	8	31	1	32
Jaffna	19	20	14	53	3	56
Vavuniya	6	2	3	11	0	11
Batticaloa	36	5	11	52	4	56
Ampara	12	11	7	30	2	32
Kalmunai	32	22	1	55	4	59
Trincomalee	23	3	9	35	2	37
Kurunegala	57	21	21	99	4	103
Puttalam	35	15	13	63	2	65
Anuradhapura	40	8	13	61	7	68
Polonnaruwa	18	2	6	26	4	30
Badulla	29	4	11	44	0	44
Monaragala	22	4	7	33	0	33
Rathnapura	70	10	48	128	6	134
Kegalle	31	19	33	83	4	88
Mannar	8	0	1	9	0	9
Mulathivu	2	0	3	5	0	5
Kilinochchi	6	5	3	14	2	16
Total	1092	394	562	2048	133	2186

PTB-Pulmonary Tuberculosis EPTB- Extra Pulmonary Tuberculosis, SP + ve - Sputum Positive , SP - ve - Sputum Negative
Data from Central TB Register
Source - National TB Register

Out of re-treatment cases, 92(69.2%) patients were relapse, 15 (11.3%) patients were treatment after failure, 23 (17.3%) patients were loss to follow up and 03 (2.2%) patients were other previously treated. A total of 2030 TB patients were screened for HIV, out of them there were 2 HIV positive patients and also 3 TB/HIV co-infection patients. Five multi drug resistant TB patients were detected during above quarter.

16. SURVEILLANCE AT SEA PORT

Details of the vaccinations carried out by the Assistant Port Health Office during the 3rd quarter 2017, is as follows;

Table 15: Surveillance at Sea port – 3rd quarter 2017

	Total
A. Yellow fever	1063
B. Meningococcal meningitis	424
C. Oral polio	388

17. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 3rd Quarter 2017 is given below.

Table 16: Surveillance at airport —3rd quarter 2017

Emerging and reemerging disease (Ebola/MERS CoV/ SARS.... Etc)	
Ebola	
No. Of passengers screened	-
No. Of suspected cases transferred	-
Zika	
No. Of passengers screened	-
No. Of suspected cases transferred	-
Malaria	
No. of passengers visited to Health office	252
No. of passengers drug issued	02
No. of blood films done (R.D.T.)	224
Referred to I.D.H./Other unit	-
Yellow Fever	
No. of yellow fever cards inspected	147
No. Invalid/without Yellow Fever cards	29
Referred to I.D.H./Other units	--

18. LEPROSY

QUARTERLY RETURN OF LEPROSY STATISTICS – 3rd QUARTER 2017

Table 17

1. National

	At the end of the quarter			Cumulative for end of the quarter		
	3rd quarter 2017	3rd quarter 2016	Diff (%)	2017	2016	Diff (%)
New patients detected	500	442	1.81%	1424	1372	3.79%
Children	45	45	0%	145	122	18.85%
Grade 2 Deformities	31	35	(-)11.4%	97	102	(-)4.90%
Multi-Bacillary	298	241	23.65%	829	735	12.79%
Females	197	174	13.21%	574	534	7.49%

2. Districts

District	New patients	G2-Deformity	Children	MB	Females
Central	16	1	1	11	3
Kandy	9	1	1	6	1
Matale	5	0	0	4	2
NuwaraEliya	2	0	0	1	0
Eastern	58	4	6	32	27
Ampara	5	0	1	1	3
Batticaloa	27	2	2	16	11
Kalmunai	15	1	1	7	6
Trincomalee	11	1	2	8	7
Northern	14	4	3	12	5
Jaffna	6	2	0	6	2
Kilinochchi	1	0	1	0	0
Mannar	2	1	0	2	0
Vavuniya	4	0	2	3	2
Mullaitivu	1	1	0	1	1
North Central	44	3	6	32	15
Anuradhapura	35	3	5	23	14
Pollonnaruwa	9	0	1	9	1
North Western	57	5	0	37	23
Kurunegala	40	3	0	26	18
Puttalam	17	2	0	11	5
Sabaragamuwa	44	1	2	22	16
Kegalle	13	0	0	7	2
Rathnapura	31	1	2	15	14
Southern	68	0	6	42	24
Galle	33	0	2	17	12
Hambanthota	16	0	3	9	7
Matara	19	0	1	16	5
Uva	12	2	0	5	4
Baddulla	3	0	0	0	0
Monaragala	9	2	0	5	4
Western	187	11	21	105	80
Colombo	67	5	7	43	27
CMC	8	0	2	5	4
Gampaha	61	5	5	29	28
Kalutara	51	1	7	28	21
Sri Lanka	500	31	45	298	197

19. SEXUALLY TRANSMITTED DISEASES

Table 18

NEW EPISODES OF STD/HIV/AIDS REPORTED OR TREATED AT STD CLINICS IN SRI LANKA

3RD QUARTER 2017

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	66	12	78	167	42	209
AIDS	12	1	13	28	6	34
Early Syphilis ²	15	4	19	46	10	56
Syphilis	108	75	183	343	190	533
Congenital Syphilis ⁴	0	2	2	2	5	7
Gonorrhoea ⁵	38	11	49	150	38	188
Ophthalmia Neonatorum ⁶	1	0	1	1	1	2
Non specific cervicitis /urethritis	193	462	655	481	1337	1818
Chlamydial infection	1	8	9	2	9	11
Genital Herpes	278	407	685	839	1285	2124
Genital Warts	335	246	581	888	689	1577
Pelvic inflammatory disease	-	13	13	-	53	53
Trichomoniasis	2	22	24	4	54	58
Candidiasis	276	394	670	760	1182	1942
Bacterial Vaginosis	-	379	379	-	1028	1028
Other sexually transmitted diseases ⁷	113	49	162	249	113	362
Non venereal	730	441	1171	1992	1479	3471

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

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, MEDICAL RESEARCH
INSTITUTE 3rd QUARTER 2017

Table 19: Bacteriological report, MRI 3rd Quarter 2017

	JUL	AUG	SEPT
(A) CHOLERA			
No. of stool specimens Examined	31	70	120
No. of positives El. Tor <i>Cholera</i>	0	0	0
<i>Ogawa</i>	0	0	0
<i>Inaba</i>	0	0	0
<i>Cholera o139</i>	0	0	0
(B) SALMONELLA			
Blood– No. Examined	0	3	2
<i>S.typhi</i>	0	0	0
<i>S.paratyphi</i>	0	0	0
Stools—No. examined	116	142	194
<i>S.typhi</i>	1	7	2
<i>S.paratyphi</i>	0	0	2
Others	34	27	31
(C) SHIGELLA			
No. of specimens examined	116	142	194
<i>Sh.flexneri I</i>	0	0	0
<i>Sh.flexneri II</i>	0	0	0
<i>Sh.flexneri III</i>	0	0	0
<i>Sh.flexneri IV</i>	0	0	0
<i>Sh.flexneri V</i>	0	0	0
<i>Sh.flexneri VI</i>	0	1	0
<i>S. sonnei</i>	2	0	5
<i>S.dysenteriae</i>	0	0	0
ENTEROPATHOGENIC E.COLI			
No.Examined	116	142	194
No.+ve	5	10	8
(E) CAMPYLOBACTER			
No.Examined	31	70	120
No. Positive	4	0	0
(F) SPECIAL			
Total	85	72	74
	632		100%

21. SURVEILLANCE OF MENINGITIS

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 3rd quarter 2017, 387 cases of suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this 310 cases were clinically confirmed by the Public Health Inspectors during their field investigations. Highest number of meningitis cases were reported from the Badulla district (52) followed by Kurunagala (25) and Moneragala (23) districts.

Forty percent of the clinically confirmed meningitis cases belonged to the age group less than one year, another 23% belonged to the age group 1-5 years and 22% belonged to age group 6 – 14 years. Sixty four percent of the clinically confirmed cases were males and 36% were females.

Table 20: Summary findings for special investigations carried out for clinically confirmed cases of Meningitis up to 30th September 2017

CSF Culture Report		
CSF Culture	Number	(%)
CSF results available	278	44%
No Growth	(272)	
Coliform	03	
Strep.Pneumonia	01	
Pseudomonas	02	
Culture results not known	321	51%
Not done	28	05%
Total	632	100%
Final outcome of the patient		
Outcome	Number	(%)
Cured	611	97%
Died	05	0.5%
Information not available	16	2.5%
Total	632	100%
Final Diagnosis (based on clinical and lab findings)		
Diagnosis	Number	(%)
Culture confirmed	05	01%
Probable bacterial meningitis	47	07%
Probable viral meningitis	61	10%
Suspected Meningitis	519	82%

22. INFLUENZA SURVEILLANCE

Human Influenza surveillance

Surveillance of human influenza is carried out under two main components; Influenza like illness (ILI) surveillance and Severe Acute Respiratory Infections (SARI) surveillance. As for the ILI surveillance, epidemiological data are collected from **19** sentinel hospitals throughout the country, out of which **13** sentinel hospitals are selected for laboratory surveillance where respiratory samples are collected. Under SARI surveillance more detailed epidemiological data and respiratory samples are collected from **four** sentinel hospitals. These respiratory samples are tested and analyzed at the National Influenza Centre (NIC), Medical Research Institute (MRI).

Epidemiological Component

ILI Surveillance

In the 3rd quarter of year 2017, seventeen hospitals out of nineteen have reported ILI data with a reporting rate of 89.5%. A total of 18408 ILI cases were reported, accounting for 1.5 % of all OPD visits (n=1157990). The highest number of ILI cases were reported from Provincial General Hospital, Anuradhapura (n=3132, 4.5%) and the majority of the patients were in the age group 1 — 4 years (n=503, 16.0 %).

SARI Surveillance

A total of 86 SARI cases were reported for the 3rd quarter of 2017 from three sentinel hospitals (Teaching Hospital Ragama, General Hospital Matara and Teaching Hospital Peradeniya. Out of 20130 hospital admissions to these three hospitals during the 3rd quarter, 0.4 % was due to SARI. The highest number of SARI cases were reported from Teaching Hospital Peradeniya (n=69, 1.0%).

Laboratory Component

ILI Surveillance

The surveillance samples from sentinel sites has been temporally stopped as there were increased number of patients with influenza like illness throughout the country in early part of 3rd quarter of year 2017. However, MRI received a total of 110 samples from the sentinel sites for the same quarter of 2017. Out of those, 12 samples were positive for influenza viruses. From the positive 12 samples, seven (58.3%) were positive for influenza A and five (41.7%) for influenza B.

The detailed results of the total number of samples both from sentinel sites and clinical samples received to MRI are as follows.

SARI Surveillance

A total of 81 respiratory samples were sent to the MRI during the 3rd quarter of year 2017, by three SARI sentinel hospitals. General hospital Matara, Teaching Hospital Ragama and T H Peradeniya. Influenza A and B were the predominant circulating Influenza viral strain identified.

Bird Influenza Surveillance

Sri Lanka has been recognized as carrying a high risk for Avian Influenza (AI) making bird influenza surveillance an important component of the influenza surveillance system. This high risk is mainly due to its location in the South East Asian Region. The country's poultry industry with a significant proportion of people engaged in backyard poultry and the commercial level poultry industry add to this risk. Also the country being a hotspot for migratory birds, attracting over two hundred species of migratory birds annually in two migratory seasons, is another risk factor that makes 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 foecal samples collected from migratory bird hotspots during the two migratory seasons, where fifteen foecal samples are collected from each bird hotspot, pooled in bottles with five samples in each and analyzed at the virology laboratory at Polgolla.

Table 21: Types of influenza viruses isolated in ILI samples for the 3rd quarter of the year 2017

The total positive rate was 11.8 % for both influenza type A and B. Influenza A (82.8 %) and B (17.2%) were the predominant circulating influenza viral strains identified for the 3rd quarter of 2017.

Month	Total Tested	Total positives	Influenza A	A(H1N1)	A(H3N2)	Untyped A	Influenza B
July	275	36	30	3	27	0	6
August	275	36	32	3	27	2	4
September	270	25	10	4	6	0	15
Total	820	87	72	10	60	2	25

(Source: NIC/MRI)

Table22: Animal samples collected by month and district for the 3rd quarter of the year 2017

Month	Pool samples for embryonated chicken egg passage	District samples collected from	Serum Samples for ELISA	District samples collected from
July	1052	Colombo,Gampaha, Kandy,Kegalle, Puttlam, Kurunegala, Vavuniya,	742	Gampaha, Monaragala, Kurunegala, Vavuniya
August	1247	Colombo,Gampaha, Kegalle, Puttlam, Kurunegala, Vavuniya, Ampara, Galle, Kalutara	1002	Colombo,Gampaha, Kegalle, Puttlam, Kurunegala, Vavuniya, Ampara, Galle, Kalutara, Kandy, Nuwara Eliya, Trincomalee
September	1086	Colombo,Gampaha, Vavuniya, Puttlam, Ampara,	731	Colombo, Gampaha, Kandy, Kurunegala. Trincomalee, Ampara
Total	3385		2475	

23. Special Report

Surveillance of Chickenpox

Out of 1221 notified Chickenpox cases, 1108 (82.3%) cases were confirmed for the 3rd quarter. Highest district reported was Badulla (101) followed by Galle (98), Colombo (92), Kalutata (91) and Kegalle (85). September was the highest month reported (433) in the 3rd quarter. According to case based investigation, maximum presentation of cases were 21 - 40 years of age (47.3%) and male (52.8%). Majority (71%) was found as no complications.

Surveillance of Mumps

Out of 64 notified Mumps cases 53 (82.8%) were confirmed for the 3rd quarter. Highest district reported was Kalutara (8) followed by Colombo (7) and Matara (6). July was the highest month reported (28) in 3rd quarter. According to case based investigation, maximum presentation of cases were 21 - 40 years of age (51.1%) and female (53.3%). Majority (80%) was found as no complications.

Table 23
24. SUMMARY OF NOTIFIABLE DISEASES – 3rd QUARTER 2017

Region/Health	Dysentery	Encephalitis	Fever/Enteric	Poisoning/Food	Rabies/Human	Leptospirosis	Measles	Fever/ConSimple	Tetanus	Fever/Typhus	Hepatitis/Viral	Cough/Whooping	/DH/Fever/Dengue	Tuberculosis	Chickenpox	Mumps	Meningitis	Leishmaniasis
Colombo	10	1	6	9	0	41	3	0	0	1	4	1	12342	463	92	7	7	0
Gampaha	9	1	0	0	0	17	0	0	2	3	7	3	13838	233	52	2	5	1
Kalutara	11	0	7	8	1	91	2	0	0	2	7	0	4469	112	91	8	43	1
Kandy	11	2	3	1	1	15	2	0	1	24	3	0	7299	109	67	4	8	4
Matale	6	3	0	4	0	7	9	0	0	0	2	0	1467	28	9	0	14	3
Nuwara-Eliya	7	2	12	44	0	28	7	0	0	81	4	0	492	60	33	1	9	0
Galle	15	6	12	4	0	131	2	6	0	35	4	0	2318	94	98	4	26	1
Hambantota	6	2	1	8	0	12	0	1	1	29	3	0	1125	33	41	1	4	132
Matara	11	0	2	9	0	63	1	0	0	7	4	1	3221	48	63	6	3	53
Jaffna	127	8	4	4	0	6	1	3	1	22	0	5	1007	62	52	4	6	0
Kilinochchi	12	0	3	0	0	1	1	0	0	2	0	0	179	18	0	0	3	1
Mannar	2	0	1	1	0	0	0	0	0	0	0	0	31	16	3	1	0	0
Vavuniya	7	0	43	3	0	3	1	0	0	2	6	0	281	11	14	0	1	0
Mullaitivu	7	2	1	4	0	7	0	1	0	0	0	0	144	8	5	0	0	0
Batticaloa	53	1	2	5	0	7	2	0	0	0	0	0	613	52	39	1	6	0
Ampara	19	0	0	1	0	8	1	0	0	0	1	0	387	29	47	4	12	1
Trincomalee	13	0	8	5	0	9	5	0	0	0	0	0	321	37	36	2	4	7
Kurunegala	30	4	3	39	2	19	1	0	2	1	3	0	4363	90	76	3	35	40
Puttalam	20	0	0	9	0	9	0	1	1	0	0	0	2915	50	22	1	14	0
Anuradhapura	7	2	0	4	1	18	5	0	0	4	4	0	1104	68	64	4	26	54
Polonnaruwa	5	0	0	8	0	7	1	0	0	3	3	0	478	36	46	1	8	31
Badulla	40	4	1	4	0	50	2	2	0	44	10	0	1983	52	101	0	69	3
Moneragala	26	0	1	0	0	33	1	5	0	40	3	0	1217	33	29	2	31	6
Ratnapura	41	16	6	1	0	144	0	1	0	6	19	1	5576	172	37	2	19	5
Kegalle	8	3	1	5	0	38	1	0	0	15	2	0	4981	70	85	4	16	4
Kalmunai	56	2	1	12	0	3	1	0	0	0	1	0	476	58	19	2	18	0
Total	559	59	118	192	5	767	49	20	8	278	90	9	72627	2042	1221	64	387	347

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.

ON STATE SERVICE

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