EPIDEMIOLOGICAL BULLETIN

SRI LANKA

First Quarter 2017

EPIDEMIOLOGY UNIT

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

CONTENTS   **PAGE NO**

1. POLIOMYELITIS

Twenty six (26) Acute Flaccid cases were notified to the Epidemiology Unit during the 1st quarter 2017. The numbers were higher than the reported AFP cases during the 1st quarter 2016 which is 15. Reported numbers to the quarter was below the expected number of AFP cases per quarter to meet the annual surveillance target of 2:100,000 under 15 year age population. The non-polio AFP rate for the first quarter of 2017 was 1.6 /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 89 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 to the Regional Epidemiologist of the respective area of patient's residence. All sentinel site hospitals are monitored for the completeness and timeliness of reporting zero weekly notification of AFP cases.

The majority of the cases (38%) were notified from the main sentinel site hospitals for AFP surveillance, Lady Ridgeway Hospital and T.H.Karapitiya. Most of these government hospitals are tertiary care centres receiving referrals from other hospitals. All the hospitals reported AFP cases during January to March are given in Table 1.

Table 01. Notification of AFP Cases from Hospi-

Hospital	No: of cases reported
LRH	7
T.H.Karapitiya	3
G.H.Badulla	1
G.H. Nuwaraeliya	2
T.H Kurunegala	3
T.H.Peradeniya	3
Army Hospital	1
SBSCH	2
T.H. Kalubowila	2
B.H.Damulla	1
D.G.H. Gampaha	1
T.H. Anuradapura	1
Total	26

Distribution of AFP cases according to provinces, districts & MOH Areas

The highest number (9) of AFP cases was belonging to the districts of Gampaha (4), Kalutara (3) and Colombo (2) in the Western Province. The complete list of distribution of AFP cases according to the province, district and MOH area are given below in table 2.

Table 02. Distribution of AFP cases by district & MOH

Province	District	MOH Area	No. of AFP cases
Western	Colombo	CMC	1
		Kahathuduwa	1
	Gampaha	Dompe	1
		Atthanagalla	2
		Divulapitiya	1
	Kalutara	Horana	1
		Madurawala	1
		Wadduwa	1
Southern	Matara	Weligama	1
		Morawaka	1
		Malimbada	1
	Hambantota	Tangalle	1
Central	Kandy	Talathuoya	1
		Gampola	1
	N'eliya	Kotagala	1
		Nawathispane	1
		N'eliya	1
	Matale	Dambulla	1
North Western	Kurunegala	Polpithigama	1
		Bingiriya	1
Eastern	Kalmunai	Akkaraipattu	1
	Tricomalee	Kuchchaweli	1
North Central	Anuradapu-	Galnewa	1
		Rambewa	1
Uva	Badulla	Haputhale	1
Total			26

Seasonal Distribution of AFP Cases

Majority of cases were reported during the month of February (12 cases, 46%). No significant seasonal variation was observed during the period.

Age and Sex Distribution of AFP Cases

Majority of AFP cases (54%) were males during the 1st quarter 2017. During the 1st quarter 2016 the trend was similar.

Table 03. Distribution of AFP cases by Age and Sex

Age Group	Sex		
	Male	Female	Total
<1 year old	0	0	00
1-4 year old	5	5	10
5-9 year old	7	3	10
10-15 year old	2	4	06
Total	14	12	26

Final diagnoses of AFP cases

Majority (88%) of the reported AFP cases were finally diagnosed as Guillain Barre Syndrome (GBS). Final diagnoses of all 15 cases of AFP are given in table 04.

Table 04: Final diagnoses of AFP patients reported during 1st quarter 2017.

Final Diagnoses	Frequency
GBS	23
Bel's palsy	01
Viral myositis	01
Auto immune encephalitis	01
Total	26

Laboratory exclusion of poliomyelitis in 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. The presence of ice in the container on receipt are the criteria to complete to make the samples of 'good condition'. Timely stool collection rate for the quarter was 88%. Hospitals contributed for late stool samples were TH.Anuradapura, LRH, BH Dambulla and reasons identified in majority of cases were transferring with majority being males from other hospitals to referral centres beyond the expected duration.

2. MEASLES

There were 89 suspected measles patients were reported during the first quarter 2017 which were compatible with clinical case definition of "fever and maculopapular rash with one of the signs of cough, coryza or conjunctivitis". This number was higher than the number reported during the previous quarter which was 47 suspected cases and one laboratory confirmed measles case. Measles incidence of <0.05/million population had been identified for laboratory confirmed measles cases which were field investigated and confirmed for curtailing of the outbreak.

These clinical cases were field investigated by the respective medical officers of the patients' residential areas. Special case based investigation forms were received at the Epidemiology Unit to identify vaccination status, risk categories and exposure status in relevant cases.

Table 05 shows the number of Measles cases by district: 1st Quarter 2017. Western Province reported the highest number of fever and maculopapular rash cases suspected of measles cases (25).

Guidelines for measles and rubella elimination has been changed since February 2017 which includes the broadening the case definition to identify all possible measles and rubella cases to be tested and excluded as non measles and non rubella cases.

Table 05: Number of Measles cases by district: 1st Quarter 2017

District	cases	District	cases
Colombo	09	Batticaloa	04
Gampaha	14	Ampara	01
Kalutara	02	Trincomalee	02
Kandy	05	Kurunegala	02
Mannar	0	Puttalam	03
Kalmunai	0	Anuradhapura	10
Galle	03	Polonnaruwa	01
Hambnatota	03	Badulla	09
Matara	06	Moneragala	06
Jaffna	01	Ratnapura	03
Vavuniya	0	Kegalle	04
Kilinochch	01		

Laboratory investigations of 80 fever and maculopapular rash patients suspected of measles or rubella were carried out in the WHO accredited virology Laboratory at the Medical Research Institute (MRI) for Measles or Rubella IgM testing. Of the total tested no measles IgM positive cases confirmed as measles from the National laboratory. The laboratory testing rate of the suspected measles cases was around 90% during the 1st quarter and achieved the expected target >80%.

3. LEPTOSPIROSIS

During the 1st Quarter 2017, 636 cases and 9 deaths (CFR 1.4 %) due to Leptospirosis were notified to the Epidemiology Unit compared to 783 cases and 18 deaths in the previous quarter and 1318 cases and 22 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 (%) – 1st Quarter 2017

Age Group	Sex	
	Male	Female
0 – 9 years	0.3	0.0
10 – 19 years	8.4	0.0
20 – 29 years	14.9	7.1
30 – 39 years	20.9	14.3
40 – 49 years	25.3	17.9
50 – 59 years	16.9	41.1
> 60 years	13.2	19.6
Total	**100.0**	**100.0**

4. HUMAN RABIES

Five cases of Human Rabies were notified to the Epidemiology Unit in the 1st quarter 2017 compared to 07 cases in the previous quarter and 08 cases in the corresponding quarter of year 2016. All notified Human Rabies cases have been confirmed.

All notified Human Rabies cases have been confirmed.

Animal Rabies

During this quarter, 114 dogs were reported positive for rabies, which is 114 in the previous quarter too and 122 positive in the same period in the last year. Thirteen cats and 10 other animals were also reported positive for rabies during the 1st quarter.

Rabies Control Activities

Dog vaccination - A total of 309791 dogs were immunized during the Quarter under review when compared to 375931in the previous quarter and 364,389 in corresponding Quarter of the last year.

Animal Birth control

Chemical- A total of 2061 female dogs were injected with birth control injections (Progesterone) during the quarter under review. **Surgical**– 23967 female dogs were subjected to sterilization by surgical method during the quarter under review.

5. VIRAL HEPATITIS

In the 1st Quarter 2017, a total of 126 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 248 cases in the previous quarter and 282 cases in the corresponding quarter of 2016. Rathnapura (26 cases) reported the highest number of cases followed by Badulla (14 cases).

6. ENTERIC FEVER

In the 1st Quarter 2017, a total of 109 cases of Enteric fever were reported to the Epidemiology Unit, compared to 128 cases in the previous quarter and 185 cases in the corresponding quarter of 2016. The district of Jaffna (15 cases) reported the highest number of cases, followed by Colombo (12 cases) and Vauvniya (12 cases).

7. DYSENTERY

In the 1st Quarter 2017 a total of 530 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 951 cases in the previous quarter and 552 cases in the corresponding quarter of 2016. Jaffna (83 cases) and Ratnapura (67 cases) reported the highest number of cases.

8. MALARIA

There were no indigenous malaria cases reported during the 1st quarter of 2017.

9. JAPANESE ENCEPHALITIS (JE)

During the 1st quarter of 2017, 115 cases of clinically suspected Encephalitis cases were reported to the Epidemiology Unit through the routine disease notification system. Out of this, 71 cases were clinically confirmed by the Public Health Inspectors during their field investigations.

During the 1st quarter of 2017, MRI has reported 20 lab confirmed JE cases. Out of these 20 confirmed JE cases, all (100%) were investigated by the MOH.

Among them, 10 (50%) were over 50 years of age, another 08 (40%) were between 21-50 years, none was between 11 - 20 years, another 2(10%) were 1-10 years while none were less than one year.

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

Table 08

SELECTED CHARACTERISTICS OF CONFIRMED CASES OF JE—1st Quarter 2017

Sex	Male	12 (60%)
	Female	08 (40%)
Age group	< 1 y	00 (00%)
	1-10 y	02 (10%)
	11- 20	00 (00%)
	21-50Y	08 (40%)
	> 50 Y	10 (50%)
District	Ratnapura	07(5%)
	Gampaha	02(10%)
	Matara	02 (10%)
	Colombo	02 (10%)
	Kalutara	02 (10%)
	Galle	02(10%)
	Matale	01 (05%)
	Hambantota	01 (05%)
	Badulla	01(05%)

Table 07 - Results of Blood smear examination for malaria parasites - 1st Quarter 2017

	1st quarter 2016	1st quarter 2017
No. of blood smears examined	281,524	244,463
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 (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– 1ST QUARTER 2017

RMO	Jan	Feb	Mar	Total
Colombo	9510	8459	6776	24745
Gampaha	2768	4654	5048	12470
Kalutara	3606	3173	1426	8205
Kandy	4721	4194	4730	13645
Matale	3137	2595	3801	9533
Nuwara Eliya	371	436	464	1271
Galle	1782	1633	1145	4560
Matara	1995	1528	1605	5128
Hambantota	2169	2389	2439	6997
Jaffna	7377	7054	8241	22672
Kilinochchi	2834	2255	2768	7857
Vavuniya	3006	3140	3615	9761
Mannar	3673	1584	3161	8418
Mullaitivu	3137	2595	3801	9533
Batticaloa	4469	4379	7782	16630
Ampara	2029	1883	2327	6239
Kalmunei	2972	3284	3823	10079
Trincomalie	2844	3255	2317	8416
Kurunegala	6194	5278	6116	17588
Maho	1470	1678	1817	4965
Puttalam	2639	2382	2985	8006
Anuradhapura	4968	4423	5042	14433
Polonnaruwa	4232	4404	5440	14076
Badulla	3594	3732	3488	10814
Monaragala	3942	3878	3869	11689
Rathnapura	3928	3710	3732	11370
Kegalle	3474	2970	3007	9451
TOTAL	96841	90945	100765	288551

Table 10

MORBIDITY AND MORTALITY DUE TO DF/DHF

RDHS Division	Cases	Percentage (%)	Deaths	CFR
Colombo	7101	21.40	15	0.21
Gampaha	4592	13.84	9	0.20
Kalutara	1865	5.62	5	0.27
Kandy	818	2.47	0	0.00
Matale	377	1.14	1	0.27
N' Eliya	124	0.37	0	0.00
Galle	1863	5.61	8	0.43
Hambantota	865	2.61	2	0.23
Matara	1150	3.47	1	0.09
Jaffna	1966	5.93	1	0.05
Kilinochchi	174	0.52	0	0.00
Mannar	303	0.91	0	0.00
Vavuniya	277	0.83	0	0.00
Mulativu	90	0.27	0	0.00
Batticaloa	1510	4.55	2	0.13
Ampara	161	0.49	0	0.00
Trincomalee	3162	9.53	17	0.54
Kurunagale	1289	3.88	1	0.08
Puttalam	540	1.63	0	0.00
A'pura	568	1.71	4	0.70
Polonnaruwa	216	0.65	0	0.00
Badulla	495	1.49	1	0.20
Moneragala	306	0.92	0	0.00
Ratnapura	1306	3.94	0	0.00
Kegalle	817	2.46	4	0.49
Kalmunai	1246	3.76	0	0.00
Total	33181	100.00	71	0.21

Table 11

DHF STATISTICS FROM **DEPARTMENT** OF VIROLOGY, MRI - 1ST QUARTER 2017

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
January	298	192 (48%)
February	269	128 (32%)
March	248	80 (20%)
Total	**815**	**400 (49%)**

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

During the 1st quarter of 2017; 33,181 cases of DF/DHF were reported from all districts (Table 1) while 71 deaths were reported (CFR 0.21%) when compared to 12,702 cases of DF/DHF and 27 deaths (CFR 0.21%) was reported during the 4th quarter of 2016. Proportion of cases notified in January, February and March were 32.93%, 26.29% and 40.78% respectively.

Table 10 shows the distribution of DF/DHF cases and deaths in the 1st quarter of 2017.

Special surveillance data of confirmed cases were received and analyzed for the 1st quarter of 2017. Age distribution of reported cases were 5.6% in <4 years age group, 12.4% in 5-9 years of age group, 10.6% in 10-14 years of age, 10.4% in 15–19 years of age, 11.9% in 20-24 years of age, 10.9% in 25-29 years of age, 8.9% in 30-34 years of age, 7.6% in 35-39 years of age, 5.2% in 40-44 years of age, 5.2% in 45-49 years of age, 4.3% in 50–54 years of age, 2.6% in 55-59 years of age and 4.5% in >60 years of age.

According to the Special surveillance data on clinical findings majority of the reported cases 83.8% were classified as dengue fever (DF) while 16.9% were classified as dengue Haemorrhagic fever (DHF).

During the 1st quarter of 2017, 815 blood samples were tested using IgM capture ELISA test at the Department of Virology, Medical Research Institute (MRI) and 400 (49%) samples were confirmed as positive. (Table 11)

11. RUBELLA AND CONGENITAL RUBELLA SYNDROME (CRS)

Laboratory confirmed Rubella cases were not detected for the 1st quarter 2017 while all suspected measles and rubella cases were tested for rubella IgM at the MRI laboratory. Only 5 cases were compatible with surveillance case definition [fever and maculopapular rash, with arthralgia/arthritis, lymphadenopathy (sub occipital, post auricular and cervical) or conjunctivitis] but none were laboratory confirmed by investigation of rubella IgM. These reported cases for the quarter were more or less same as the reported cases during the compatible quarter in 2016.

Since no laboratory confirmed rubella cases were detected during the first quarter, non-measles, non-rubella rate calculated for the quarter was 1.8/100,000 population while the expected target was >2/100,000 population.

Suspected Congenital Rubella Syndrome reported cases with congenital abnormalities and cases tested for TORCH screen at MRI laboratory, were identified for rubella IgM positive status. All cases were thoroughly investigated at the field level to confirm or exclude CRS cases. CRS cases were not detected during the 1st quarter 2017.

12. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 1st Quarter 2017. Last case of cholera was reported in the country in January 2003.

13. TETANUS

Seven tetanus cases were reported to the Epidemiology Unit during 1st quarter 2017. Harispathtuwa MOH area of Kandy district Cheddikulam MOH area of Vavuniya district Damana MOH area of Ampara district Dimbulagala MOH area of Polonnaruwa district Ratnapura MC MOH area of Ratnapura district Mahara (2) MOH area of Gampaha district reported the tetanus cases during the quarter.

14. SURVEILLANCE REPORT ON AEFI

Surveillance of Adverse Events Following Immunization (AEFI) effectively continued in the 1st Quarter of 2017 has reached 100% of completeness of reports, while 46.5% reports were received in time at the Epidemiology Unit indicating good compliance for the system by the MOOH. Colombo, Gampaha, Kalutara, Kandy, Matale , Nuwara Eliya , Galle , Hambantota ,Matara, Jaffna, Kilinochchi, Mannar, Vavuniya, Mullativu, Batticaloa, Ampara, Trincomalee, Kurunegala, Puttalam, Anuradhapura,Polonnaruwa, Badulla, Moneragala, Rathnapura, Kegalle, Kalmunai were able to send all reports. The best timeliness was reported from the Jaffna district (92.9%) followed by Vavuniya (91.7%) and Kilinochchi (75.0%). (Table 12)

The highest percentage of nil reports were received from Ampara (61.9%) followed by Kalmunai district (41.0%), which more than two fold of the Sri Lanka average (21.0%) indicating the need for more attention for AEFI surveillance reporting from both hospitals and MOH staff. Low percentage of nil returns reported from Kegalle (3.0%) and Colombo districts (5.9%) indicating the good surveillance system in place. The highest rate (739.2 per 100,000 immunizations) of AEFI was reported from Mullativu district, while Colombo reported the highest number of 313 AEFI cases in first quarter 2017.

For the first quarter, the highest number of AEFI (n=1601) was reported against Pentavalent vaccine, whereas the highest rate of AEFI (1260.9/100,000 doses administered) reported against DTP vaccine. The rate of AEFI for Pentavalent (01st, 02nd & 03rd dose) is 689.7 per 100,000 doses administered. High Fever (907), Allergic Reaction (423), Nodule (606) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (515 cases: 221.9 per 100,000 doses administered) and DPT (330 cases: 411.6 per 100,000 doses administered) vaccines. For Allergic reactions, it was largely due to PVV (147 cases: 63.3 per 100,000 doses administered) and LJE (16 cases: 20.3per 100,000 doses administered) (Table 13).

.

Table 12

COMPLETENESS AND TIMELINESS OF MONTHLY REPORTING AND RECEIPT OF "NIL" REPORTS OF AEFI BY RDHS DIVISIONS

RDHS	%	%	%	No. of	AEFI Rate
Colombo	100.0	56.9	5.9	313	233.0
Gampaha	100.0	40.0	6.7	198	146.9
Kalutara	100.0	40.5	16.7	147	177.3
Kandy	100.0	31.9	12.5	249	236.7
Matale	100.0	64.1	20.5	70	175.9
Nuwara Eliya	100.0	30.8	25.6	86	152.0
Galle	100.0	58.3	25.0	104	148.2
Hambantota	100.0	47.2	8.3	149	312.8
Matara	100.0	51.0	13.7	134	228.6
Jaffna	100.0	92.9	7.1	205	615.4
Kilinochchi	100.0	75.0	16.7	40	478.2
Mannar	100.0	73.3	40.0	30	331.5
Vavuniya	100.0	91.7	25.0	62	462.2
Mullativu	100.0	38.9	33.3	64	739.2
Batticaloa	100.0	38.1	38.1	50	114.4
Ampara	100.0	19.0	61.9	16	78.3
Trincomalee	100.0	44.4	27.8	70	187.8
Kurunegala	100.0	47.6	33.3	177	466.3
Puttalam	100.0	25.6	35.9	48	40.7
Anuradhapura	100.0	21.1	19.3	167	276.0
Polonnaruwa	100.0	19.0	19.0	85	114.7
Badulla	100.0	54.2	14.6	93	271.4
Moneragala	100.0	66.7	18.2	69	109.0
Ratnapura	100.0	55.6	14.8	174	416.9
Kegalle	100.0	60.6	3.0	112	143.6
Kalmunai	100.0	12.8	41.0	41	72.9
Sri Lanka	**100.0**	**46.5**	**21.0**	**2953**	**201.1**

Table 13 : Number of Selected Adverse Events by Vaccines – 1st Quarter 2017

	BCG	OPV	PVV	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI reported
Total Number of AEFI Reported	6	5	1601	1011	112	62	58	19	39	**2913**
AEFI reporting rate/100,000 doses administered	8.8	1.3	689.7	1260.9	70.9	78.6	71.3	13.6	48.2	
High Fever (>39°C)		1	515	330	22	26	12		1	**907**
Reporting rate/100,000 doses administered		0.3	221.9	411.6	13.9	33.0	14.7		1.2	
Allergic reactions		3	147	164	57	16	23	8	5	**423**
Reporting rate/1 00,000 doses administered		0.8	63.3	204.5	36.1	20.3	28.3	5.7	6.2	
Severe local reactions			38	40	1	2	3		1	**85**
Reporting rate/100,000 doses administered			16.4	49.9	0.6	2.5	3.7		1.2	
Seizure (Febrile/Afebrile)			24	81	4	6	1			**116**
Reporting rate/100,000 doses administered			10.3	101.0	2.5	7.6	1.2			
Nodules			452	130	3	1	7	3	10	**606**
Reporting rate/100,000 doses administered			194.7	162.1	1.9	1.3	8.6	2.1	12.4	
Injection site abscess	2		180	24				2		**208**
Reporting rate/100,000 doses administered	2.9		77.5	29.9				1.4		
HHE			2			1				**3**
Reporting rate/100,000 doses administered			0.9			1.3				

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

15. TUBERCULOSIS

A total of 2015 Tuberculosis patients were registered for the 1st Quarter 2017. Of this total 1890 (93.8%) were New pulmonary TB Patients. Out of new TB cases 927 (49.0%) were Bacteriology Confirmed TB, 418 (22.1%) were clinically diagnosed TB (sputum negative) while the balance 545 (28.8%) were New Extra Pulmonary TB Patients .

Out of 124 (6.2%) Retreatment Cases there were 81 (4.0%) patients with relapse. There was one HIV/TB positive patient found from the 1959 screened for HIV in the quarter, Three Multi Drug Resistant TB patients were detected. The distribution of Tuberculosis patients by RDHS division is given in Table 14.

Table 14: TUBERCULOSIS PATIENTS BY RDHS DIVISIONS - 1st Quarter 2017

RDHS DIVISION	New				Retreatment & other	Total
	PTB sp+ve	PTB sp-ve	EPTB	Total		
Colombo	219	104	110	433	40	473
Gampaha	151	57	54	262	20	282
Kalutara	68	24	45	137	6	143
Kandy	40	24	28	92	5	97
Matale	18	4	2	24	0	24
Nuwara Eliya	29	17	28	74	5	79
Galle	52	14	19	85	4	89
Matara	22	8	14	44	3	47
Hambantota	11	2	12	25	0	25
Jaffna	20	37	21	78	5	83
Vavuniya	10	2	7	19	1	20
Batticaloa	8	1	9	18	2	20
Ampara	5	4	7	16	0	16
Kalmunai	12	22	5	39	3	42
Trincomalee	10	11	6	27	3	30
Kurunegala	47	21	30	98	5	103
Puttalam	22	10	11	43	3	46
Anuradhapura	26	05	21	52	1	53
Polonnaruwa	14	8	7	29	1	30
Badulla	19	6	19	44	6	50
Monaragala	12	6	6	24	0	24
Rathnapura	48	10	57	115	2	117
Kegalle	53	14	21	88	7	95
Mannar	2	2	2	6	2	8
Mulathivu	4	1	3	8	0	8
Kilinochchi	5	4	1	10	1	11
Total	**927**	**418**	**545**	**1890**	**125**	**2015**

PTB-Pulmonary Tuberculosis

EPTB– Extra Pulmonary Tuberculosis

SP + ve - Sputum Positive

SP – ve - Sputum Negative

Data from Central TB Register

16. SURVEILLANCE AT SEA PORT

Details of the vaccinations carried out by the Assistant Port Health Office during the 1st quarter 2017, is as follows;

	Vaccine	Total
A.	Yellow fever	1095
B.	Meningococcal meningitis	806
C.	Oral polio	378

17. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 1st Quarter 2016 is given below.

Emerging and remerging 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	326
No. of passengers drug issued	05
No. of blood films done (R.D.T.)	580
Referred to I.D.H./Other unit	-
Yellow Fever	
No. of yellow fever cards inspected	32
No. Invalid/without Yellow Fever cards	01
Referred to I.D.H/Other units	01

18. LEPROSY

TABLE 15: QUARTERLY RETURN OF LEPROSY STATISTICS - 1ST QUARTER 2017

1. National

	At the end of the quarter			Cumulative for end of the quarter		
	1st quarter 2017	1st quarter 2016	Diff	2017	2016	Diff
New patients detected	459	423	36 (8.5)	459	423	36 (8.5)
Children	46	41	5 (12.1)	46	41	5 (12.1)
Grade 2 Deformities	33	43	-10 (-23.2)	33	43	-10 (-23.2)
Multi-Bacillary	257	239	18 (7.5)	257	239	18 (7.5)
Females	194	161	33 (20.5)	194	161	33 (20.5)

2. Districts

District	New patients	G2-Deformity	Children	MB	Females
Central	15	0	2	11	6
Kandy	5		0	5	2
Matale	4	0	0	4	0
NuwaraEliya	6	0	2	2	4
Eastern	49	2	2	23	28
Ampara	8	0	1	3	5
Batticaloa	24	2	1	11	13
Kalmunai	13	0	0	7	7
Trincomalee	4	0	0	2	3
Northern	14	1	1	13	4
Jaffna	10	1	1	9	2
Kilinochchi					
Mannar					
Vavuniya	3	0	0	3	1
Mullaitivu	1	0	0	1	1
North Central	36	3	3	18	15
Anuradhapura	14	1	1	9	6
Pollonnaruwa	22	2	2	9	9
North Western	46	6	4	28	18
Kurunegala	23	4	1	17	7
Puttalam	23	2	3	11	11
Sabaragamuwa	27	3	1	18	8
Kegalle	9	3	0	6	1
Rathnapura	18	0	1	12	7
Southern	59	3	4	31	23
Galle	19	2	1	9	8
Hambanthota	24	1	2	12	11
Matara	16	0	1	10	4
Uva	11	3	0	6	3
Baddulla	6	2	0	3	2
Monaragala	5	1	0	3	1
Western	202	12	29	109	89
Colombo	77	6	12	41	31
CMC	18	3	2	11	8
Gampaha	56	0	10	34	23
Kalutara	51	3	5	23	27
Sri Lanka	**423**	**43**	**41**	**239**	**158**

Source : Anti Leprosy Campaign

19. SEXUALLY TRANSMITTED DISEASES

Table 16: NEW EPISODES OF STD/HIV/AIDS REPORTED OR TREATED AT STD CLINICS IN SRI LANKA

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		
		Male	Female	Total	Male	Female	Total
HIV positives[1]		56	17	73	56	17	73
AIDS		6	2	8	6	2	8
Syphilis	Early Syphilis[2]	18	2	20	18	2	20
	Late Syphilis[3]	130	59	189	130	59	189
	Congenital Syphilis[4]	1	1	2	1	1	2
Gonorrhoea[5]		69	18	87	69	18	87
Ophthalmia Neonatorum[6]		0	1	1	0	1	1
Non specific cervicitis/urethritis		149	485	634	149	485	634
Chlamydial infection		1	0	1	1	0	1
Genital Herpes		293	443	736	293	443	736
Genital Warts		285	253	538	285	253	538
Pelvic Inflammatory dis.		-	17	17	-	17	17
Trichomoniasis		1	13	14	1	13	14
Candidiasis		253	414	667	253	414	667
Bacterial Vaginosis		-	351	351	-	351	351
Other sexually transmitted diseases[7]		72	35	107	72	35	107
Non venereal		662	641	1303	662	641	1303

Source: NSACP

*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 2years 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, Scabis,Tinea, Hepatitis- B etc

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

20. BACTERIOLOGY REPORT, MEDICAL RESEARCH INSTITUTE

Table 17: Bacteriological report, MRI 1st Quarter 2017

	Jan	Feb	Mar
(A) CHOLERA			
No. of stool specimens Examined	66	34	31
No. of positives El. Tor *Cholera*	0	0	0
Ogawa	0	0	0
Inaba	0	0	0
Cholera o139	0	0	0
(B) SALMONELLA			
Blood– No. Examined	0	0	0
S.typhi	0	0	0
S.paratyphi A	0	0	0
Stools—No. examined	118	75	91
S.typhi	2	3	2
S.paratyphi A	0	0	1
Others	18	5	15
(C) SHIGELLA			
No. Examined	118	75	91
S.flexneri I	0	0	0
S.flexneri ii	0	1	1
S.flexneri iii	1	0	0
S.flexneri iv	0	0	0
S.flexneri v	0	0	0
S.flexneri vi	0	0	0
S.*Sonnei*	4	0	2
S.*dysenteriae*	0	0	0
(D) ENTEROPATHOGENIC E.COLI			
No.Examined	118	75	91
No. positive	16	12	12
(E) CAMPYLOBACTER			
No.Examined	66	34	31
No. Positive	0	0	0
(F) Special	52	41	60

21. SURVEILLANCE OF MENINGITIS–1st quarter 2017

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 1st quarter 2017, 439 cases of suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this 380 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 Ratnapura (44) and Kalutara (33) districts.

Thirty eight 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 20% belonged to age group 6 – 14 years. Sixty six percent of the clinically confirmed cases were males and 34% were females.

Table 18

Summary findings for special investigations carried out for clinically confirmed cases of Meningitis up to 31st March 2017

CSF Culture Report		
CSF Culture	**Number**	**(%)**
CSF Reports available	100	44%
No Growth	98	
Coliform	01	
Steph. Pneumonia	01	
Pseudomonas	02	
Culture results not known		
Not done	121	53%
Total	08	03%
	129	100%
Final outcome of the patient		
Outcome	**Number**	**(%)**
Cured	228	99%
Died	01	01%
Information not available	00	
Total	229	100%
Final Diagnosis (based on clinical and lab findings)		
Diagnosis	**Number**	**(%)**
Culture confirmed	04	01%
Probable bacterial meningitis	17	07%
Probable viral meningitis	27	13%
Suspected Meningitis	183	80%
Total	229	100%

22. INFLUENZA SURVEILLANCE - 1st quarter 2017

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 respiratory samples are collected from 13 sentinel hospitals. Under SARI surveillance more detailed epidemiological data and respiratory samples are collected from four sentinel hospitals. Respiratory samples are tested and analyzed at the National Influenza Center (NIC), Medical Research Institute (MRI).

Epidemiological Component

ILI Surveillance

In the 1st quarter of year 2017, eighteen hospitals out of nineteen have reported ILI data with a reporting rate of 94.7%. A total of 25436 ILI cases were reported, accounting for 2.23% of the all OPD visits (n=1138425). The highest number of ILI cases were reported from Teaching Hospital Kurunagala (n=4740, 18.63%) and the majority of the patients were in the age group 15—49 years (n=8191, 32.2%).

SARI Surveillance

A total of 628 SARI cases were reported for the 1st quarter of 2017 from 3 sentinel hospitals (Teaching Hospital Ragama, General Hospital Matara and Teaching Hospital Peradeniya). Out of 27803, all hospital admissions during the quarter, 2.26% were due to SARI. The highest number of SARI cases were reported from Teaching Hospital Peradeniya (n=390, 62.1%).

Laboratory Component

ILI Surveillance

Respiratory samples for ILI and SARI surveillance was performed only in the months of January and February in the 1st quarter of 2017. The laboratory component of the surveillance was temporarily stopped in March due to the onset of outbreak. A total of 82 ILI respiratory samples were received by the MRI from sentinel hospitals 55 samples in January, 27 in February. NHSL (n=20) and IDH (n=15) had sent the highest numbers of samples followed by Teaching Hospital Jaffna (n=11), General Hospital Ratnapura (n=10), General Hospital Chilaw (n=9), Teaching Hospital Kurunegala (n=5). All sentinel hospitals except Teaching Hospital Anuradhapura and General Hospital Nuwara Eliya, had sent samples within the quarter (Table 19). Influenza A was the predominant circulating Influenza viral strain identified (Table 21).

SARI Surveillance

A total of 65 respiratory samples were sent to the MRI during the 1st quarter of 2016, by four SARI sentinel hospitals. General hospital Matara (n=39) had sent the highest number of samples followed by Lady Ridgeway Hospital (n=29) and Teaching Hospital Peradeniya (n=2) (Table 02).Influenza A was the predominant circulating Influenza viral strain identified (Table 22).

Table 19: Monthly performance of sentinel hospitals in the laboratory component of the ILI surveillance for the 1st quarter of the year 2017

	Jan	Feb	Total
NHSL	10	10	20
CSTH	1	1	2
IDH	8	7	15
GH Nuwara Eliya	0	0	0
TH Karapitiya	4	0	4
TH Jaffna	7	4	11
TH Batticaloa	3	0	3
TH Kurunegala	5	0	5
GH Chilaw	4	5	9
TH Anuradhapura	0	0	0
GH Polonnaruwa	1	0	1
GH Badulla	2	0	2
GH Ratnapura	10	0	10
Total	**55**	**27**	**82**

Table 20: Monthly performance of sentinel hospital in the laboratory component of the SARI surveillance in the 1st quarter of the year 2017

Institution	January	February	Total
CNTH Ragama	11	33	44
TH Peradeniya	20	18	38
GH Matara	14	53	67
LRH	10	10	20
Total	55	114	169

Table 21: Types of Respiratory Viruses Isolated in ILI samples in the 1st quarter of the year 2017

Month	Total Tested	Total tested positive	Proportion tested positive (Yield)	Influenza A N(%)	A (H1N1) pdm09	A(H3N2)	A Un-typed	Influenza B N(%)
January	55	5	9.1%	3 (60%)	0	1	1	2 (40%)
Feb.	27	2	7.4 %	2 (100%)	0	0	0	0 (0%)
March	1497	676	45.2%	614 (90.8%)	0	0	0	62 (9.2%)
Total	1579	683	43.3%	619 (90.6%)	0	1	1	64 (9.4%)

Table 22: Types of Respiratory Viruses Isolated in SARI Samples in the 1st quarter of the year 2017

Month	Total Tested	Total tested positive	Proportion tested positive (Yield)	Influenza A N(%)	A (H1N1) pdm09 N(%)	A (H3N2) N(%)	A Un-typed N(%)	Influenza B N(%)
Janu-	55	10	18.2%	10 (100%)	2	2	0	0 (0%)
Feb.	114	27	23.7%	27(100%)	0	0	0	0 (0%)
Total	169	37	21.9%	37(100%)	2	2	0	0 (0%)

Bird Influenza Surveillance

Sri Lanka has been recognizes 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 fecal samples collected from migratory bird hotspots during the two migratory seasons, where 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 23: Animal samples collected by month and district for the 1st quarter of the year 2017

Month	No. of samples		Districts samples were collected from
	Pooled fecal sam-	Serum samples	
Jan.	768	358	Colombo, Gampaha, Puttalam, Kegalle, Badulla, Kilinochchi, Jaffna, Vavuniya, Trincomalee, Kurunegala
Feb.	1697	395	Colombo, Gampaha, Nuwara Eliya, Trincomalee, Kaluthara, Hambatota, Polonnaruwa, Kandy, Matale, Ampara, Anuradhapura, Kurunegala, Moneragala, Puttalam, ,Jaffna, Vavuniya, Badulla
Mar.	1316	1127	Colombo, Gampaha, Batticaloa, Polonnaruwa, Kandy, Rathnapura, Kaluthara, Trincomalee, Chilaw, Anuradhapura,Pannala, Ampara, Moneragala, Dambulla, Jaffna, Vavuniya, Badulla
Total	3781	1880	

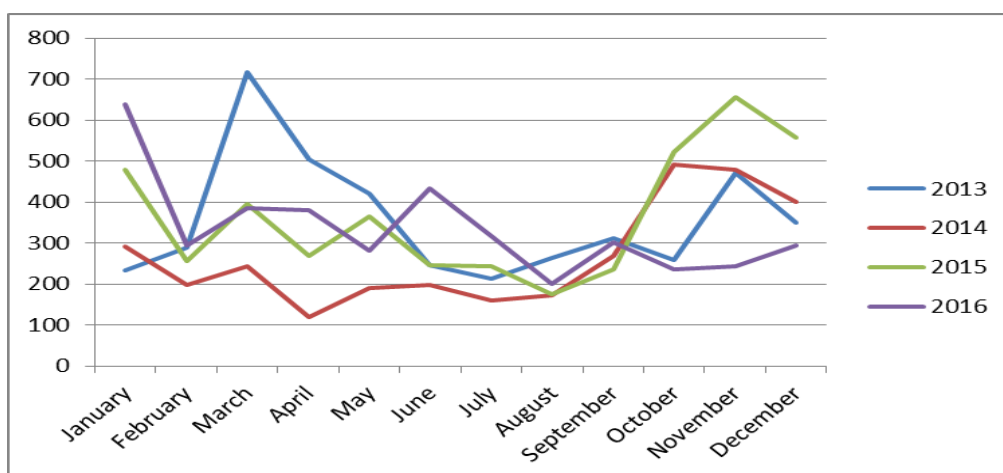### 23. SPECIAL REPORT – Leptospirosis Surveillance Report – 2016

Leptospirosis is a zoonotic disease found throughout the world, particularly in tropical and subtropical regions including in Sri Lanka. Infection is caused by pathogenic leptospirosis that are excreted in the urine of infected animals, especially rodents. Leptospirosis can survive in soil or water for weeks or longer, and humans can become infected through direct contact with infected animals, or through contact with soil or water contaminated by the urine of infected animals. Risk factors for human infections and drivers of outbreaks depend on interactions between humans, animals, and the environment. Environmental factors play an important role in disease transmission, and a high risk of leptospirosis has been linked to high rainfall, flooding, natural disasters and poor sanitation. Human activities that increase exposure to animals, soil, mud and water are also important risk factors. Each year approximately 3000 to 5000 cases are notified from the entire country.

Surveillance of Leptospirosis

The surveillance of leptospirosis is carried out by the Epidemiology Unit. In addition to routine notifications, hospital (sentinel site) and field based special surveillance is carried out. Special surveillance gives a detailed description of leptospirosis patients including clinical / Laboratory data, information on disease transmission and prophylaxis.

The trend of *leptospirosis notification in the year 2013-2016 showed a strong seasonality, with higher rates in paddy cultivation and harvesting seasons.*

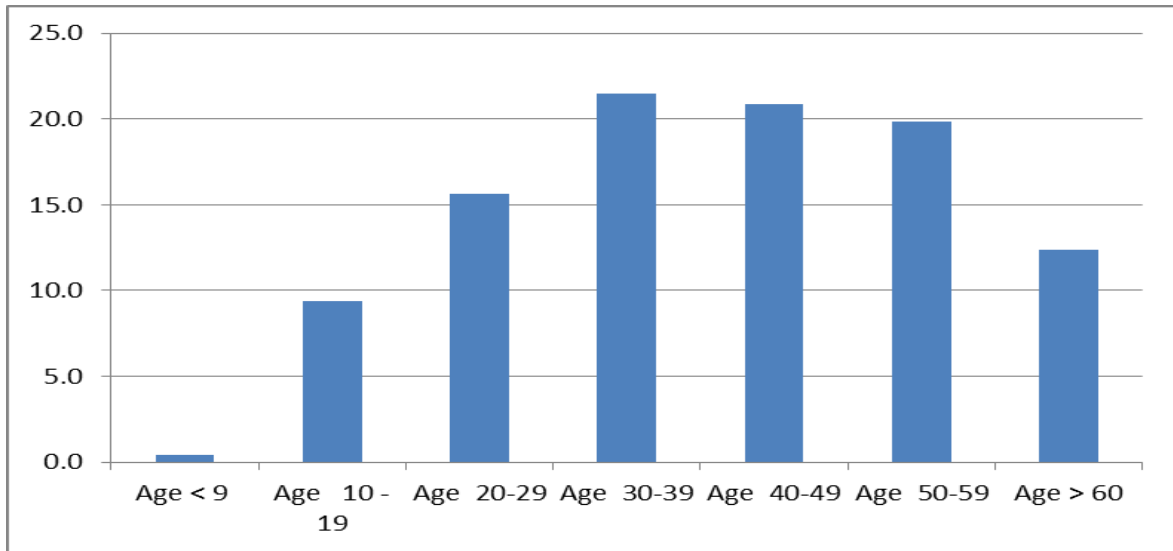**Graph 1: Distribution of Leptospirosis cases by month 2013-2016**

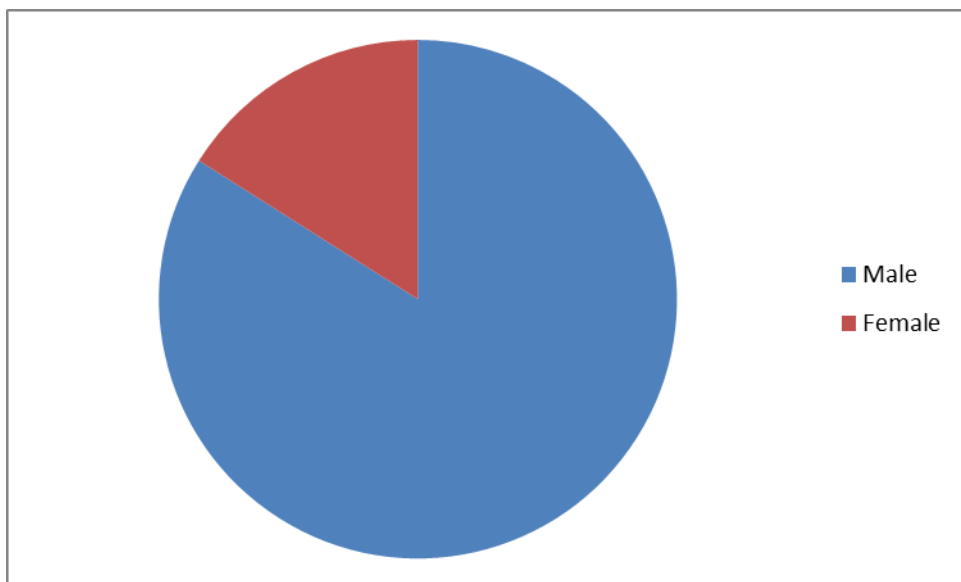Source- Notification data, Epidemiology Unit

16

Characteristics of Leptospirosis patients

Graph 2: Age distribution of Leptospirosis cases -2016 (%)

Source – Special surveillance data Epidemiology Unit

Graph 3: Sex distribution of Leptospirosis cases 2016 (%)

Source – Special surveillance data Epidemiology Unit

17

Table 24: Distribution of suspected leptospirosis cases by districts by month in 2016

| RDHS	Jan.	Feb.	March	April	May	June	July	August	Sep.	October	Nov.	Dec	Total
Colombo	10	18	30	23	13	50	23	16	54	24	16	15	292
Gampaha	19	28	48	36	33	44	21	20	28	23	23	13	336
Kalutara	56	46	69	56	29	31	33	27	20	28	16	27	438
Kandy	36	15	6	8	3	11	14	2	15	2	0	6	118
Matale	24	8	9	5	2	8	12	3	12	1	2	6	92
N Eliya	9	2	4	3	2	8	8	10	7	6	6	5	70
Galle	56	27	17	27	12	32	24	12	23	39	58	46	373
Hambantota	22	10	19	6	8	15	4	3	5	3	5	6	106
Matara	20	9	23	25	11	26	18	9	18	9	18	23	209
Jaffna	7	0	0	0	1	0	2	2	3	2	4	3	24
Kilinochchi	10	1	0	0	0	1	0	1	0	0	3	1	17
Mannar	6	1	1	0	0	0	0	1	1	0	1	0	11
Vavuniya	6	2	2	1	0	1	0	0	1	2	0	4	19
Mulativu	8	0	8	3	2	1	1	0	1	0	0	4	28
Batticaloa	8	6	4	5	4	5	3	3	4	4	3	7	56
Ampara	5	6	6	3	4	0	0	1	1	0	0	0	26
Trincomalee	2	0	1	8	7	4	4	2	2	2	3	6	41
Kurunegala	29	10	13	13	9	25	17	8	14	6	11	17	172
Puttalam	11	8	4	2	5	4	0	3	2	7	6	1	53
Apura	90	26	17	25	14	31	26	12	14	4	3	14	276
Pol-onnaruwa	34	8	5	2	18	7	8	3	1	2	1	2	91
Badulla	21	15	9	14	14	12	11	14	6	7	8	4	135
Moneragala	63	16	28	23	5	5	13	2	4	2	2	12	175
Ratnapura	40	21	47	72	65	88	63	33	51	52	46	59	637
Kegalle	44	9	12	19	18	24	11	11	11	8	8	13	188
Kalmunai	2	2	4	0	2	1	2	2	3	3	0	1	22
Sri Lanka	638	294	386	379	281	434	318	200	301	236	243	295	4005

Source- Notification data, Epidemiology Unit

Highest number of leptospirosis cases were reported from Ratnapura district followed by Kalutara and Galle districts. January witnessed the highest number of cases (638) from the entire country.

Leptospirosis is more common in adults, and notification rates were higher for males. Out of the total cases, 84% were males and 16% were females. The age distribution of reported cases of leptospirosis for the year 2016 is given in figure 2. The majority of patients were in the middle age group who are more economically productive.

Source of exposure

According to data reported through the special surveillance, majority of patients were exposed through paddy fields, followed by marshy/ muddy lands.

Graph 4: Distribution of patients according to the source of exposure
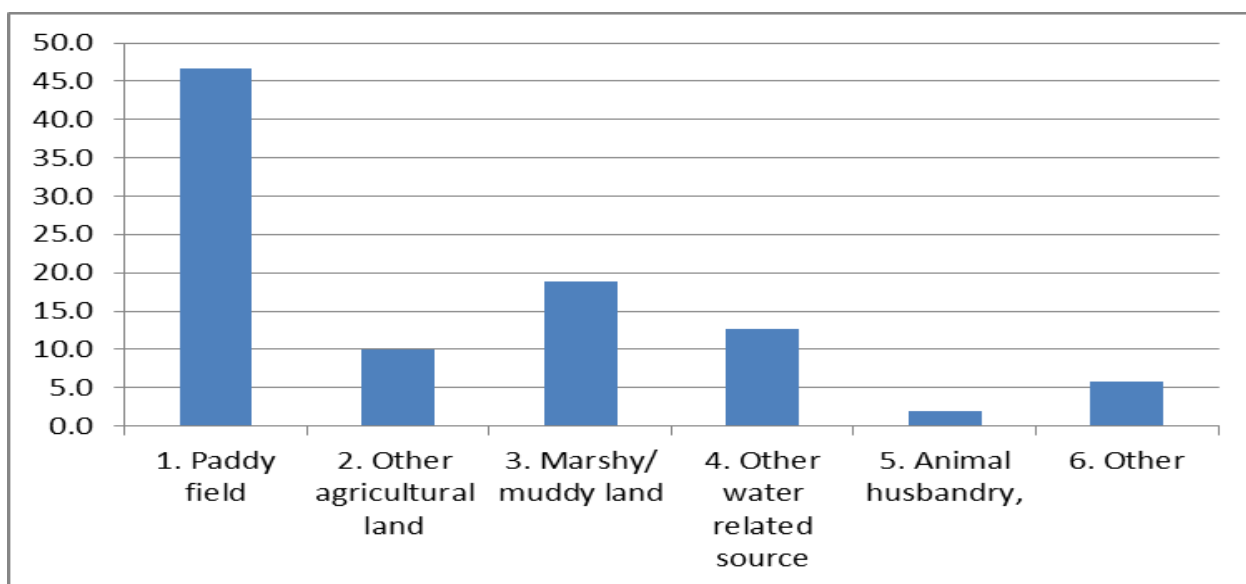
Source – Special surveillance data Epidemiology Unit

Prevention and control

Epidemiology Unit carried out broad district/local level strategies to prevent and control the transmission of lepto-spirosis. Surveillance activities were intensified mainly during paddy cultivation seasons with MOOH, REE and central level involvement aimed at early detection of outbreaks. Chemoprophylaxis with Doxycycline was given for selected high risk population under close monitoring by Public Health staff. Mass media campaigns were carried out to complement field level awareness programmes during the paddy cultivation period. Progress of implementation, prevention and control activities were discussed at quarterly Regional Epidemiologists conference.

Table 31

24. SUMMARY OF NOTIFIABLE DISEASES - 1ST QUARTER 2017

Health Region	Dengue Fever	Dysentery	Encephalities	Enteric Fever	Food Poisoning	Leptospirosis	Typhus Fever	Viral Hepatitis	Human Rabies	Chickenpox	Meningitis	Leishmaniasis	Mumps	Measles	Tetanus	Whooping Cough	Tuberculosis	Simple Contd.Fever
Colombo	7101	32	1	12	5	25	1	5	0	120	12	1	3	8	0	0	310	0
Gampaha	4592	14	11	11	8	25	7	6	1	107	15	1	7	13	2	0	237	0
Kalutara	1274	20	2	2	15	54	2	1	0	161	22	0	9	6	0	0	72	13
Kandy	828	21	2	1	0	17	52	6	0	98	14	3	4	5	1	0	88	0
Matale	377	9	0	0	0	20	1	4	0	14	24	2	1	0	0	0	29	0
Nuwaraeliya	124	8	1	7	0	11	53	4	0	52	18	0	6	1	0	0	84	4
Galle	1863	18	6	5	9	67	22	0	0	119	17	0	3	2	0	0	79	15
Hambantota	865	14	3	5	15	11	22	5	1	84	9	125	1	1	0	0	20	1
Matara	1150	15	7	0	2	24	11	3	0	61	2	39	5	5	0	1	49	1
Jaffna	1966	91	7	18	30	19	356	3	0	69	17	0	2	2	0	0	94	15
Kilinochchi	174	6	0	5	0	2	9	2	0	0	2	0	0	1	0	0	11	1
Mannar	303	4	0	1	0	0	2	0	0	3	0	0	1	0	0	0	7	0
Vavuniya	277	8	0	12	2	11	4	1	0	14	1	6	1	1	1	0	22	0
Mullativu	90	2	0	3	0	8	3	1	0	3	5	1	0	0	0	0	8	0
Batticaloa	1510	43	8	9	5	7	0	4	0	70	13	1	2	3	0	0	28	1
Ampara	161	8	1	1	0	6	1	2	0	57	10	2	1	1	1	0	16	0
Trincomalee	3162	5	1	3	1	7	7	7	0	51	10	1	3	2	0	0	19	0
Kurunegala	1289	23	0	0	2	33	20	6	0	216	16	45	13	3	0	0	99	1
puttalam	540	17	1	1	0	6	10	1	0	76	12	3	7	3	0	1	34	0
Anuradhapura	568	14	1	1	3	26	9	6	0	136	12	98	8	14	0	1	58	1
Kalmunai	1246	18	4	1	6	5	0	0	0	78	5	0	0	1	0	0	36	4
Polonnaruwa	216	8	4	5	0	14	3	1	0	88	6	46	6	1	1	0	27	0
Badulla	495	32	3	4	1	19	14	14	1	91	57	6	5	8	0	0	64	2
Monaragala	306	14	3	0	2	39	53	10	0	30	20	4	1	3	0	0	24	3
Ratnapura	1306	67	47	5	3	149	15	25	0	132	71	1	4	2	1	0	122	2
Kegalle	817	20	4	2	14	18	30	5	0	95	27	4	3	3	0	0	93	1
NIHS Kalutara	591	2	0	2	5	25	0	0	0	37	13	0	2	0	0	0	43	0
Total	33191	533	117	116	128	648	707	122	3	2062	430	389	98	89	7	3	1773	65

No polio cases. (from AFP surveillance system).

ON STATE SERVICE

DR. SAMITHA GINIGE
Actg. CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10.