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SRI LANKA

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CONTENTS PAGE NO

EPIDEMIOLOGY UNIT

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1. POLIOMYELITIS

Sixteen (16) Acute Flaccid cases were notified to the Epidemiology Unit during the 4th quarter 2016. This is lower than the reported AFP cases during the 4th quarter 2015, which is 17. 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 first quarter of 2015 was 1.3 :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 71 sentinel sites are currently functioning and last updated in 2015. 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 patientõs residence .

Out of all the reported AFP cases during the quarter 37.5% have been reported from Lady Ridgeway Hospital. All the hospitals reported AFP cases during January to March are given in table 01.

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

The highest number of cases was reported from Kandy district. The complete list of distribution of AFP cases according to the province, district and MOH area is given in Table 02.

Seasonal Distribution of AFP Cases

Majority of cases were reported during the month of October (43.75%). No significant seasonal variation observed during the period.

Table 01

Notification of AFP cases by sentinel hospitals 4th Quarter 2016

Hospital	No: of cases reported
LRH	6
SBSCH	3
TH Peradeniya	1
GH Nuwara Eliya	1
TH Kandy	2
TH Anuradhapura	1
GH Badulla	2
Total	16

Table 02 : Geographical distribution of AFP cases 4th quarter 2016

Province	District	MOH Area	Number of AFP cases
Western	Colombo	Kahathuduwa	1
	Gampaha	Gampaha	1
		Dompe	1
	Kalutara	Wadduwa	1
Central	Kandy	Pujapitiya	1
		Gampola	1
		Thalathuoya	1
	Matale	Ukuwela	1
	Nuwara Eliya	Nuwara Eliya	1
		Rikillagaskada	1
Sabaragamuwa	Kegalle	Galigamuwa	1
North Western	Kurunegala	Udubaddawa	1
	Puttalam	Mahawewa	1
Uva	Badulla	Ella	11
		Welimada	1
North Central	Anuradhapura	Kebithigollewa	1
Total			16

Age and Sex Distribution of AFP cases

Majority of the AFP cases were boys during the 4th quarter 2016 and this was similar when compared with the 4th quarter 2015. Majority (81.25%) of the cases were between 1-9 years during the 4th quarter this year and the trend was higher compared to the compatible quarter in the previous year.

The ageð sex distribution of reported cases are given in table 03.

Table 03. Distribution of AFP cases by Age 4th Quarter 2016.

Age Group	Sex		Total
	Male	Female	
<1 year old	1	0	1
1-4 year old	6	2	8
5-9 year old	4	1	5
10-15 year old	1	1	2
Total	12	4	16

Final diagnoses of AFP cases

Majority (70.58%) of the reported AFP cases were finally diagnosed as Guillain Barre Syndrome (GBS). Final diagnoses of all 16 cases of AFP are given in table 04. the GBS rate was 0.9/100,000 under 15 population.

Table 04: Final diagnoses of AFP patients reported during 4th quarter 2016.

Final Diagnoses	Frequency
GBS	13
Transverse Myelitis	02
Hypokalemic Paralysis	01
Total	16

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 ógood conditionô 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 ógood conditionô

Out of all cases 12 AFP cases (75.0%) had both stool samples collected timely and sent to MRI for polio virology.

2. MEASLES

Outbreak situation experience in the country has come down during the 4th quarter 2016 with declining tendency.48 cases were suspected of possible measles during the 4th quarter 2016 but only 43 cases were identified as compatible with clinical case definition of ñfever and maculopapular rash with one of the signs of cough, coryza or conjunctivitisò Other suspected cases were discarded as non measles cases. These clinical cases were field investigated (29%) by the respective medical officers of health (MOH) of the patientsôresidential areas and special field investigation reports have been sent to the Epidemiology Unit.

Of the cases compatible with clinical case definition of Measles 18% were below 9 month of age whom measles vaccination is not indicated. Western province (47%) and North central province (14%) reported majority of measles cases..

Laboratory investigations of suspected measles or rubella patients (02) from October to December 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 01 cases were serology positive for Measles IgM antibodies. Outbreak of measles was considered as continuing at declining tendency during the fourth quarter.

3. LEPTOSPIROSIS

During the 4th Quarter 2016, 738 cases and 18 deaths (CFR 2.3%) due to Leptospirosis were notified to the Epidemiology Unit compared to 823 cases and 9 deaths in the previous quarter and 1771 cases and 26 deaths during corresponding quarter of 2015.

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

Table 05: SELECTED CHARACTERISTICS OF LEPTOSPIROSIS PATIENTS(%)- 4th QUARTER 2016

Age Group	Sex	
	Male	Female
0 - 9 years	0.3	0.0
10 - 19 years	10.7	2.8
20 - 29years	16.8	7.0
30 - 39years	25.0	14.1
40 - 49years	21.4	15.5
50 - 59 years	12.2	26.8
>60years	13.5	33.8
Total	100.00	100.00

4. HUMAN RABIES

Seven cases of Human Rabies were notified to the Epidemiology Unit in the 4th quarter 2016 compared to 7 cases in the previous quarter and 6 cases in the corresponding quarter of year 2015.

All notified Human Rabies cases have been confirmed.

Animal Rabies

During this quarter, 114 dogs were reported positive for rabies, compared to 118 in the previous quarter and 127 positive in the same period in the last year.

Rabies Control Activities

Dog vaccination - A total of 375931 dogs were immunized during the Quarter under review when compared to 452044 in the previous quarter and 377448 in corresponding Quarter of the last year.

Animal Birth control

Chemical- A total of 1928 female dogs were injected with birth control injections (Progesterone) during the quarter under review. **Surgical**ï 55543 female dogs were subjected to sterilization by surgical method during the quarter under review.

5. VIRAL HEPATITIS

In the 4th Quarter 2016, a total of 219 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 230 cases in the previous quarter and 602 cases in the corresponding quarter of 2016. Rathnapura (45 cases) reported the highest number of cases followed by Monaragala district (28 cases).

6. ENTERIC FEVER

In the 4th Quarter 2016, a total of 99 cases of Enteric fever were reported to the Epidemiology Unit, compared to 163 cases in the previous quarter and 156 cases in the corresponding quarter of 2015. The district of Jaffna and Vavuniya (13 cases each) reported the highest number of cases.

7. DYSENTERY

In the 4th Quarter 2016, a total of 821 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 925 cases in the previous quarter and 1188 cases in the corresponding quarter of 2015. Batticaloa (83) and Jaffna (106) reported the highest number of cases.

8. MALARIA

There were no indigenous malaria cases reported during the 4th quarter of 2016. there were 8 imported malaria cases for the 4th quarter 2016.

9.JAPANESE ENCEPHALITIS (JE)

During the 4th quarter 2016, 53 cases of clinically suspected Encephalitis 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 4th quarter of 2016, MRI has reported 3 lab confirmed JE cases. All 3 JE cases(100%) were investigated by the MOH . Up-to 4th quarter 2016 MRI has reported total number of 20 lab confirmed JE cases.

Among them,07 (35%) were over 50 years of age, another 04 (20%) were between 21 -50 years, another 03 (15%) were between 11 - 20 years, another 05 (25%) were1-10 years while01 (05%) was less than one year.

The highest number of confirmed JE cases (09) were reported from Gampaha, district followed by (02) each from Kurunegala,Kalutara, Colombo, Kandy districts and (01) each from Puttalam Anuradhapura and Pollonnaruwa districts. The majority of confirmed JE cases have not been immunized.

Table 07

SELECTED CHARACTERISTICS OF CONFIRMED CASES OF JE—up to 4th Quarter 2016 (N= 20)

Sex	Male	08 (40%)
	Female	12 (60%)
Age group	< 1 y	01 (05%)
	1-10 y	05 (25%)
	11- 20	03 (15%)
	21-50Y	04 (20%)
	> 50 Y	07 (35%)
District	Gampaha	09 (45%)
	Kurunegala	02 (10%)
	Kalutara	02 (10%)
	Colombo	02 (10%)
	Kandy	02 (10%)
	Puttalam	01 (05%)
	Anuradapura	01 (05%)
	Pollonnaruwa	01 (05%)

Table 06

Results of Blood smear examination for malaria parasites - 4th Quarter 2016

	4th quarter 2015	4th quarter 2016
No. of blood smears examined	294,134	271,014
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 08

DISTRIBUTION OF NUMBER OF BLOOD SMEARS EXAMINED BY DISTRICT RMO– 4TH QUARTER 2016

RMO	Oct	Nov	Dec	Total
Colombo	6,686	7,109	6,674	20,469
Gampaha	3,374	6,656	4,155	14,185
Kalutara	2,128	1,667	2,409	6,204
Kandy	5,429	5,014	3,989	14,432
Matale	2,248	2,756	2,849	7,863
Nuwara Eliya	389	784	844	2,017
Galle	2,023	1,709	1,976	5,708
Matara	1,967	2,226	2,002	6,195
Hambantota	2,097	2,208	2,270	6,575
Jaffna	4,169	4,480	6,443	15,092
Kilinochchi	2,469	2,152	2,494	7,115
Vavuniya	2,613	3,470	3,214	9,297
Mannar	2,966	3,353	3,234	9,553
Mullaitivu	2,379	2,555	2,363	7,297
Batticaloa	5,180	4,644	5,164	14,988
Ampara	1,850	2,239	1,380	5,469
Kalmunei	3,645	3,642	2,235	9,522
Trincomalie	3,234	3,457	3,143	9,834
Kurunegala	6,115	6,427	6,280	18,822
Maho	1,574	1,609	1,370	4,553
Puttalam	3,126	2,906	2,307	8,339
Anuradhapura	4,850	5,267	5,310	15,427
Pollonnaruwa	4,037	4,316	3,313	11,666
Badulla	2,058	3,426	2,951	8,435
Monaragala	3,898	3,691	3,733	11,322
Rathnapura	4,319	3,922	3,503	11,744
Kegalle	2,911	2,752	3,229	8,892
TOTAL	87,734	94,446	88,834	271,014

Table 09

MORBIDITY AND MORTALITY DUE TO DF/DHF - 4TH QUARTER 2016

RDHS Division	Cases	Percentage (%)	Deaths	CFR
Colombo	3323	26.16	4	0.12
Gampaha	1682	13.24	9	0.54
Kalutara	615	4.84	3	0.49
Kandy	578	4.55	2	0.35
Matale	267	2.10	0	0.00
N' Eliya	61	0.48	0	0.00
Galle	1284	10.11	4	0.31
Hambantota	230	1.81	0	0.00
Matara	361	2.84	0	0.00
Jaffna	667	5.25	0	0.00
Kilinochchi	20	0.16	0	0.00
Mannar	113	0.89	0	0.00
Vavuniya	54	0.43	0	0.00
Mulativu	26	0.20	0	0.00
Batticaloa	157	1.24	0	0.00
Ampara	40	0.31	0	0.00
Trincomalee	149	1.17	0	0.00
Kurunagale	438	3.45	2	0.46
Puttalam	123	0.97	0	0.00
A'pura	123	0.97	0	0.00
Polonnaruwa	88	0.69	1	1.14
Badulla	455	3.85	0	0.00
Moneragala	114	0.90	0	0.00
Ratnapura	612	4.82	0	0.00
Kegalle	292	2.30	0	0.00
Kalmunai	830	6.53	2	0.24
Total	12702	100.0	27	0.21

Table 10

DHF STATISTICS FROM DEPARTMENT OF VIROLOGY, MRI - 4TH QUARTER 2016

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
October	135	24 (17.8%)
November	97	38 (39.2%)
December	130	65 (50.0%)
Total	362	127 (35.1%)

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

During the 4th quarter of 2016;12,702cases of DF/DHF were reported from all districts (Table 9) while 27deaths were reported (CFR 0.21%) when compared to 19,204 cases of DF/DHF and 26 deaths (CFR 0.14%)was reported during the3rd quarter of 2016. Proportion of cases notified in October, November and December were 17.21%,17.86% and 64.93% respectively.

Table1 shows the distribution of DF/DHF cases and deaths in the 4th quarter of 2016.

Special surveillance data of confirmed cases were received and analyzed fort the 3rd quarter of 2016. Age distribution of reported cases were 5.4% in <4years age group,8.4% in 5-9 years of age group,9.3% in 10-14 years of age, 11.4% in 15ï 19 years of age, 16.1% in 20-24 years of age, 12.5% in 25-29 years of age,8.5% in 30-34 years of age, 8.3% in 35-39 years of age,4.7% in 40-44 years of age, 4.9% in 45-49 years of age,3.2% in 50ï 54 years of age,3.1% in 55-59 years of age and 4.4% in >60 years of age.

According to the Special surveillance data on clinical findings majority of the reported cases7 9.0%were classified as dengue fever while 20.5%were classified as dengue-Haemorrhagic fever.

During the 4th quarter of 2016, 362 blood samples were tested using IgM capture ELISA test at the Department of Virology, Medical Research Institute (MRI) and 127(35.1%) samples were confirmed as positive. (Table 10)

11. RUBELLA AND CONGENITAL RUBELLA SYNDROME (CRS)

During the whole quarter all suspected fever and maculopapuler rash Patients tested measles were also tested rubella IGM antibodies and none of them were positive for rubella Igm. Infect no rubella cases for the quarter.

No CRS cases were reported during the quarter and not detected at the laboratory during investigations of babies for TORCH screen.

12. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 4th Quarter 2016. Last case of cholera was reported in the country in January 2003.

13. TETANUS

One tetanus case was reported during 4th quarter 2016. Vakarai MOH area of the Batticaloa district was the MOH area which reported the tetanus case during the quarter.

14. SURVEILLANCE REPORT ON AEFI

Surveillance of Adverse Events Following Immunization (AEFI) effectively continued in the 4th Quarter of 2016 has reached 99.1% of completeness of reports, while 56.0% reports were received in time at the Epidemiology Unit indicating good compliance for the system by the MOOH. Colombo, Gampaha, Matale , Nuwara Eliya , Galle , Hambantota , Jaffna, Kilinochchi, Mannar, Vavuniya, Mullativu, Batticaloa, Ampara, Trincomalee, Kurunegala, Puttalam, Anuradhapura,Polonnaruwa, Badulla, Moneragala, Kegalle, were able to send all reports. The best timeliness was reported from the Jaffna district (97.2%) followed by Kegalle (84.8%) and Mannar (80.0%). (Table 11)

The highest percentage of nil reports were received from Mannar (53.3%) followed by Batticaloa district (40.5%), which more than two fold of the Sri Lanka average (19.8%) indicating the need for more attention for surveillance. Hambantota and Jaffna district has no ñNil returnò followed by Kegalle (3.0%) and Colombo districts (3.9%) indicating the good surveillance system in place. The highest rate (1262.3 per 100,000 immunizations) of AEFI was reported from Mullativu district, while Colombo reported the highest number of 312 AEFI cases in Fourth quarter 2016.

For the first Fourth, the highest number of AEFI (n=1514) was reported against Pentavalent vaccine, where as the highest rate of AEFI (1021.1/100,000 doses administered) reported against DTP vaccine. The rate of AEFI for Pentavalent (01st, 02nd & 03rd dose) is 620.5 per 100,000 doses administered. High Fever (932), Allergic Reaction (575), Nodule (537) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (549 cases: 225.0 per 100,000 doses administered) and DPT (277 cases: 337.1 per 100,000 doses administered) vaccines. For Allergic reactions, it was largely due to PVV (139 cases: 57.0 per 100,000 doses administered) and LJE (145cases: 164.8 per 100,000 doses administered).

Table 11

COMPLETENESS AND TIMELINESS OF MONTHLY REPORTING AND RECEIPT OF "NIL" REPORTS OF AEFI BY RDHS DIVISIONS - 4TH QUARTER 2016

DPDHS	% completeness	% Timely returns	% Nil Returns	No. of AEFI	AEFI Rate (100,000 vaccine doses)
Colombo	100.0	68.6	3.9	312	212.7
Gampaha	100.0	40.0	13.3	255	186.7
Kalutara	97.6	43.9	19.5	155	184.2
Kandy	91.7	65.2	24.2	138	127.9
Matale	100.0	53.8	30.8	56	141.9
Nuwara Eliya	100.0	46.2	25.6	100	171.1
Galle	100.0	60.0	30.0	117	148.9
Hambantota	100.0	69.4	0.0	195	339.7
Matara	98.0	62.0	24.0	95	162.4
Jaffna	100.0	97.2	0.0	132	356.0
Kilinochchi	100.0	66.7	33.3	28	304.8
Mannar	100.0	80.0	53.3	17	182.9
Vavuniya	100.0	75.0	25.0	74	564.2
Mullativu	100.0	73.3	40.0	103	1262.3
Batticaloa	100.0	54.8	40.5	65	137.2
Ampara	100.0	47.6	38.1	35	156.0
Trincomalee	100.0	72.7	24.2	94	227.9
Kurunegala	100.0	56.8	14.8	201	163.1
Puttalam	100.0	33.3	30.6	63	99.1
Anuradhapura	100.0	28.1	8.8	204	263.8
Polonnaruwa	100.0	33.3	14.3	58	158.8
Badulla	100.0	45.8	14.6	89	129.4
Moneragala	100.0	66.7	9.1	96	220.4
Ratnapura	98.1	64.2	13.2	194	242.1
Kegalle	100.0	84.8	3.0	110	51.0
Kalmunai	100.0	10.3	35.9	54	134.2
Sri Lanka	**99.1**	**56.0**	**19.8**	**3040**	**178.3**

Table 12: Number of Selected Adverse Events by Vaccines – 4th Quarter 2016

	BCG	OPV	PVV[1]	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI reported
Total Number of AEFI Reported	8	23	1514	839	241	251	77	24	12	2989
AEFI reporting rate/1,000,000 doses administered	9.8	5.5	620.5	1021.1	139.3	285.2	83.9	17.6	18.2	
High Fever (>39°C)		9	549	277	36	41	18		2	932
Reporting rate/1,000,000 doses administered		2.1	225.0	337.1	20.8	46.6	19.6		3.0	
Allergic reactions	1	8	139	115	134	145	22	8	3	575
Reporting rate/1,000,000 doses administered	1.2	1.9	57.0	140.0	77.4	164.8	24.0	5.9	4.6	
Severe local reactions			43	54	11	4	2		1	115
Reporting rate/1,000,000 doses administered			17.6	65.7	6.4	4.5	2.2		1.5	
Seizure (Febrile/ Afebrile)			14	49	4	7				74
Reporting rate/1,000,000 doses administered			5.7	59.6	2.3	8.0				
Nodules	2	2	387	128	6	3	8	1		587
Reporting rate/1,000,000 doses administered	2.5	0.5	158.8	155.8	3.5	3.4	8.7	0.7		
Injection site abscess	2	1	151	17	4	1	1			177
Reporting rate/1,000,000 doses administered	2.5	0.2	61.9	20.7	2.3	1.1	1.1			
HHE			2							2
Reporting rate/1,000,000 doses administered			0.8							

1-PentaValent Vaccine

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

15. TUBERCULOSIS

A total of 2159 TB patients were notified to the NPTCCD by H 816A (TB notification form) for 4th quarter 2016 while 2117 patients were registered at chest clinics during the same quarter according to the quarterly report on case finding.

Out of this total, 1982 (93.6%) TB patients were new cases, 133 (6.3%) were Reï treatment cases and 02 cases are in the previous treatment history unknown category.

Out of new TB cases, 964 (48.6%) were bacteriological confirmed TB, 396 (20.0%) were clinically diagnosed (sputum negative) TB and 622 (31.4%) were New Extra Pulmonary TB cases. A total of 1991 TB patients were screened for HIV, out of them none were detected positive for HIV. There were 3 patients with known positive HIV status at the time of TB diagnosis. A total of 3 patients were with TB/HIV co infection. Five Multi Drug Resistant TB patients was detected during this quarter.

Table 13: Tuberculosis situation 4t h quarter 2016

RDHS DIVISION	New				Retreatment & previous history unknown	Total
	Bacteriologically confirmed	Clinically diagnosed	EPTB	Total		
Colombo	260	112	137	509	45	554
Gampaha	145	53	69	267	9	276
Kalutara	66	12	34	112	2	114
Kandy	46	35	44	125	6	131
Matale	13	4	11	28	2	30
Nuwara Eliya	25	16	27	68	4	72
Galle	39	16	22	77	10	87
Matara	25	8	23	56	2	58
Hambantota	9	6	8	23	2	25
Jaffna	28	24	30	82	4	86
Vavuniya	7	2	3	12	3	15
Batticaloa	11	2	12	25	3	28
Ampara	10	6	8	24	2	26
Kalmunai	21	11	7	39	3	42
Trincomalee	11	16	10	37	2	39
Kurunegala	40	12	33	85	9	94
Puttalam	21	4	15	40	2	42
Anuradhapura	36	2	18	56	5	61
Polonnaruwa	11	5	3	19	5	24
Badulla	23	11	17	51	5	56
Monaragala	9	4	8	21	0	21
Rathnapura	64	11	52	127	1	128
Kegalle	37	18	24	79	6	85
Mannar	3	3	3	9	0	9
Mulathivu	1	1	3	5	1	6
Kilinochchi	3	2	1	6	2	8
Total	**964**	**396**	**622**	**1982**	**133**	**2117**

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

16. SURVEILLANCE AT SEA PORT

Details of the vaccinations carried out by the Assistant Port Health Office during the 4th quarter 2016, is as follows;

		Total
A.	Yellow fever	675
B.	Meningococcal meningitis	980
C.	Oral polio	386

17. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 4th Quarter 2016 is given below.

Table 14: Surveillance at Airport- 4t h quarter 2016

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	378
No. of passengers drug issued	16
No. of blood films done (R.D.T.)	366
Referred to I.D.H./Other unit	-
Yellow Fever	
No. of yellow fever cards inspected	62
No. Invalid/without Yellow Fever cards	-
Referred to I.D.H/Other units	-

18. LEPROSY

QUARTERLY RETURN OF LEPROSY STATISTICS - 4TH QUARTER 2016

Table 15

1. National

	At the end of the quarter			Cumulative for end of the quarter		
	4th quarter 2016	4th quarter 2015	Diff (%)	2016	2015	Diff (%)
New patients detected	501	793	-282 (36)	1832	1977	-152 (7.7)
Children	41	104	-63 (60.6)	158	223	-66 (29.6)
Grade 2 Deformities	35	81	-46 (55.7)	138	198	-60 (30.3)
Multi-Bacillary	184	439	-255 (58.1)	980	1064	-89 (8.4)
Females	189	348	-259 (45.7)	708	830	-122 (14.7)

2. Districts

District	New patients	G2-Deformity	Children	MB	Females
Central	9	1	0	1	2
Kandy	6	0	0	1	0
Matale	3	1	0	0	2
NuwaraEliya	0	0	0	0	0
Eastern	**68**	**5**	**9**	**22**	**23**
Ampara	18	4	2	6	4
Batticaloa	21	0	5	5	10
Kalmunai	19	1	1	6	5
Trincomalee	10	0	1	5	4
Northern	**12**	**6**	**1**	**6**	**4**
Jaffna	7	5	0	4	2
Kilinochchi	2	0	0	1	2
Mannar	0	0	0	0	0
Vavuniya	1	1	0	1	0
Mullaitivu	2	0	1	0	0
North Central	**47**	**2**	**1**	**24**	**16**
Anuradhapura	19	0	1	11	4
Pollonnaruwa	28	2	0	13	12
North Western	**46**	**1**	**1**	**19**	**21**
Kurunegala	24	0	0	8	8
Puttalam	22	1	1	11	13
Sabaragamuwa	**34**	**1**	**1**	**14**	**14**
Kegalle	3	1	0	3	1
Rathnapura	31	0	1	11	13
Southern	**61**	**14**	**6**	**14**	**14**
Galle	16	8	4	8	7
Hambanthota	26	5	2	5	4
Matara	19	1	0	1	3
Uva	**20**	**9**	**2**	**9**	**4**
Baddulla	12	7	0	7	4
Monaragala	8	2	2	2	0
Western	**204**	**75**	**20**	**75**	**91**
Colombo	75	24	8	24	33
CMC	19	5	3	5	3
Gampaha	59	23	5	23	34
Kalutara	51	23	4	23	21
Sri Lanka	**501**	**184**	**41**	**184**	**189**

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

4TH QUARTER 2016

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]		44	14	58	189	62	251
AIDS		6	2	8	42	11	53
Syphilis	Early Syphilis[2]	15	15	30	88	44	132
	Late Syphilis[3]	142	75	217	505	288	793
	Congenital Syphilis[4]	1	1	2	4	5	9
Gonorrhoea[5]		62	15	77	234	66	300
Ophthalmia Neonatorum[6]		1	0	1	3	1	4
Non specific cervicitis/urethritis		153	451	604	588	1595	2183
Chlamydial infection		4	0	4	8	9	17
Genital Herpes		299	418	717	1299	1713	3012
Genital Warts		285	222	507	1149	926	2075
Chancroid		0	0	0	0	0	0
Trichomoniasis		2	8	10	10	55	65
Candidiasis		291	421	712	1123	1544	2667
Bacterial Vaginosis		0	365	365	0	1368	1368
Other sexually transmitted diseases[7]		74	47	121	321	197	518
Non venereal		683	456	1139	2845	1796	4641

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 Lymphogranuloma 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 I NSTITUTE 4th QUARTER 2016

Table 17: Bacteriological report, MRI 4th Quarter 2016.

	Oct	Nov	Dec
(A) CHOLERA			
No. of stool specimens Examined	51	204	120
No. of positive El. Tor *Cholera*	0	0	0
Ogawa	0	0	0
Inaba	0	0	0
Cholera o139	0	0	0
(B) SALMONELLA			
Bloodï No. Examined	0	0	0
S.typhi	0	0	0
S.paratyphi	0	0	0
Stoolsð No. examined	161	497	283
S.typhi	1	1	1
S.paratyphi	0	1	0
Others	8	14	13
(C) SHIGELLA			
No. Examined	161	497	283
Sh.flexneri I	0	1	0
Sh.flexneri II	6	2	0
Sh.flexneri III	0	0	0
Sh.flexneri IV	0	0	0
Sh.flexneri V	0	0	0
Sh.flexneri VI	2	1	1
S.sonnei	1	4	1
S.dysenteriae	0	0	0
(D) ENTEROPATHOGENIC E.COLI			
No.Examined	5	11	14
No.+ve	0	0	0
(E) CAMPYLOBACTER			
No.Examined	110	293	163
No. Positive	0	1	0
(F) SPECIAL	31	20	18

21. SURVEILLANCE OF MENINGITIS– 1st quarter 2015

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 4th quarter 2016, 472 cases of suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this 357 cases were clinically confirmed by the Public Health Inspectors during their field investigations. Highest number of meningitis cases were reported from theBadulla district (39) followed by Kalutara(38) andRatnapura(35) districts.

Twenty nine percent of the clinically confirmed meningitis cases belonged to the age group less than one year, another 22% belonged to the age group 1-5 years and 17% belonged to age group 6 ï 14 years. Sixty two percent of the clinically confirmed cases were males and 38% were females.

Table 18: Summary findings for special investigations carried out for clinically confirmed cases of Meningitis up to 31 December 2016

CSF Culture Report		
CSF Culture	**Number**	**(%)**
CSF results available	345	40%
No Growth 100%	330	
Grouup B streptococci	07	
Coliform	03	
H.Influenza	02	
N.Meningitis	01	
TB	02	
Culture results not known	493	58%
Not done	17	02%
Total	855	100%
Final outcome of the patient		
Outcome	Number	(%)
Cured		
Died		
Information not available		
Total		
Final Diagnosis (based on clinical and lab findings)		
Diagnosis	Number	(%)
Culture confirmed	15	02%
Probable bacterial meningitis	84	10%
Probable viral meningitis	54	06%
Suspected Meningitis	702	82%
Total	855	100%

22. INFLUENZA SURVEILLANCE- 4th quarter 2016

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 selected for the 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 Center (NIC), Medical Research Institute (MRI).

Epidemiological Component

ILI Surveillance

In the 4th quarter of year 2016, seventeen hospitals out of nineteen have reported ILI data with a reporting rate of 89.47%. A total of 20067 ILI cases were reported, accounting for 2.0% of the all OPD visits (n=1003183). The highest number of ILI cases were reported from Teaching Hospital Kurunegala (n=3966,19.76%) and the majority of the patients were in the age group 15ð 49 years (n=6524,32.51%).

SARI Surveillance

Atotal of 195 SARI cases were reported for the 4th quarter of 2016 from three sentinel hospitals (Teaching Hospital Ragama, General Hospital Mataranand Teaching Hospital Peradeniya). Out of 26258all hospital admissions during the 4th quarter, 0.74% were due to SARI. The highest number of SARI cases were reported from Teaching Hospital Peradeniya (n=116, 59.48%).

Laboratory Component

ILI Surveillance

A total of 161 ILI respiratory samples were received by the MRI from sentinel hospitals during the 4th quarter of 2016; 43 samples in October, 61 in November and 57 in December. NHSL (n=30), had sent the highest number of samples followed by General hospital Ratnapura (n=25)Teaching hospital Batticaloa (n=7), IDH (n=14), General hospital Polonnaruwa (n=11), General hospital NuwaraEliya (n=3), General hospital Badulla (n=19), Teaching Hospital Anuradhapura (n=5), Teaching Hospital Kurunegala (n=11), Teaching Hospital Kalubowila (n=1), General Hospital Chilaw (n=26),Teaching Hospital Karapitiya (n=9). All sentinel hospitals except Teaching Hospital Jaffna had sent samples within the 4rd quarter. Influenza A was the predominant circulating Influenza viral strains identified.

SARI Surveillance

A total of 92 respiratory samples were sent to the MRI during the 4rd quarter of year 2016, by three SARI sentinel hospitals. General hospital Matara (n=58) had sent the highest number of samples followed by Lady Ridgeway Hospital (n=29) , Teaching Hospital Ragama (n=3) and Teaching Hospital Peradeniya (n=2) . (Table 02). Influenza A was the predominant circulating Influenza viral strain identified (Table 4).

Table 19: Monthly performance of sentinel hospitals in the laboratory component of the ILI surveillance for the 4th quarter of the year 2016

	October	November	December	Total
NHSL	10	10	10	30
THKalubowila	0	1	0	1
IDH	0	4	10	14
GH NuwaraEliya	0	3	0	3
TH Karapitiya	1	6	2	9
TH Jaffna	0	0	0	0
TH batticaloa	3	3	1	7
TH Kurunegala	6	5	0	11
GH Chilaw	2	14	10	26
TH Anuradhapura	0	0	5	5
GH Polonnaruwa	6	3	2	11
GH Badulla	5	7	7	19
GH Ratnapura	10	5	10	25
Total	43	61	57	161

(Source: Epidemiology Unit)

Table 20: Monthly performance of sentinel hospitals in the laboratory component of the SARI surveillance for the 4th quarter of the year 2016

	October	November	December	**Total**
TH Ragama	0	2	1	3
TH Peradeniya	0	0	2	2
GH Matara	14	10	34	58
LRH	9	9	11	29
Total	23	21	48	92

(Source: Epidemiology Unit)

Table 21: Types of Influenza viruses isolated in ILI samples for the 4th quarter of the year 2016

Month	**T o t a l Tested**	**Influenza A**	**A(H1N1)**	**A(H3N2)**	**Untyped A**	**Influenza B**
October	43	1	0	1	0	0
November	61	1	0	1	0	0
December	57	8	0	8	0	0
Total	**161**	10	0	10	0	0

(Source: NIC/MRI)

Table 22: Types of Influenza viruses Isolated in SARI samples for the 4th quarter of the year 2016

Month	Total	Influenza A	A(H1N1)	A(H3N2)	Untyped A	Influenza B
October	23	2	0	0	0	1
November	21	5	0	4	0	0
December	48	15	0	15	0	0
Total	92	22	0	19	0	1

(Source: NIC/MRI)

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 countryôs poultry industry with a significant proportion of people engaged in backyard poultryand 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 4th quarter of the year 2016

Month	Pool Samples for Embryonated Chicken Egg Passage	Districts samples were collected from	Serum Samples for ELISA	Districts samples were collected from
October	1710	Colombo, Gampaha, Anuradhapura, Kandy, Puttalam , Hambantota, Trincomalee	639	Colombo, Gampaha,Matara, Vavuniya, Kandy, Puttalam , Hambantota, Trincomalee
November	619	Colombo, Gampaha, Ampara, Kegalle, Jaffna, Anuradhapura, Hambantota	442	Colombo, Gampaha, Kegalle, Jaffna, Kurunegala
December	1235	Colombo, Gampaha,Kurunegala, Hambantota,Jaffna, Kegalle, Ampara, Anuradhapura, Kaluthara, Vavuniya, Rathnapura, Puttalam, Kilinochchi	457	Colombo, Gampaha,Kurunegala, Hambantota, Jaffna, Kegalle, , Anuradhapura, Kaluthara,
Total	**3564**		**1538**	

23. SPECIAL REPORT

Leptospirosis Surveillance Report – 2015

Leptospirosis is a zoonotic disease found throughout the world, particularly in tropical and subtropical regions where environmental conditions favor the survival and transmission of leptospira, the causative bacteria which is found in animal hosts. The bacterial infects the humans by entering the body through mucus membranes or abraded skin when exposed to water that has been contaminated by urine from chronically infected animals, especially rodents. Each year approximately 3000 to 5000 cases are notified from the entire country.

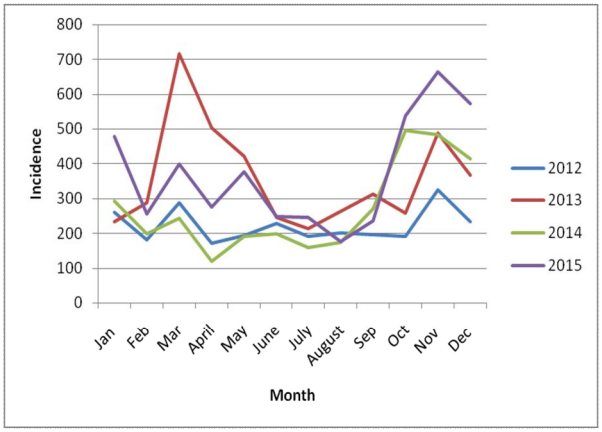
Surveillance of Leptospirosis

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.

Seasonal distribution of leptospirosis cases

The trend of leptospirosis notification in the year 2012- 2015 followed a seasonal variation which was linked with paddy cultivation and harvesting.

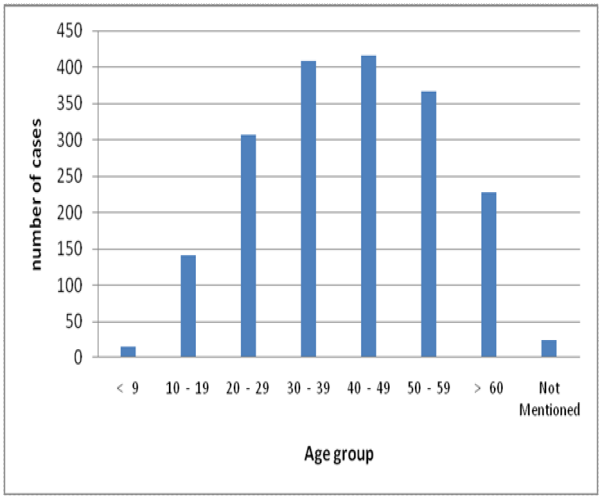
Graph 1: Leptospirosis cases by month 2012-2015



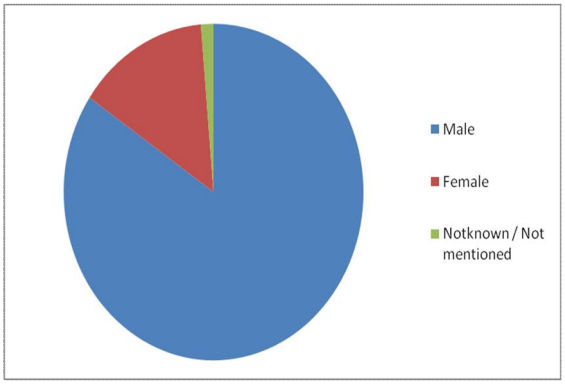
Age and sex distribution of leptospirosis cases

The majority of leptospirosis cases reported during the year were males. Out of the total cases, 84.5% were males and 14% were females. The age distribution of reported cases of leptospirosis for the year 2014 is given in figure 2. The majority of patients were in the middle age group.

Graph 2: Age distribution of Leptospirosis cases -2015



Graph 3: Sex distribution of Leptospirosis cases - 2015



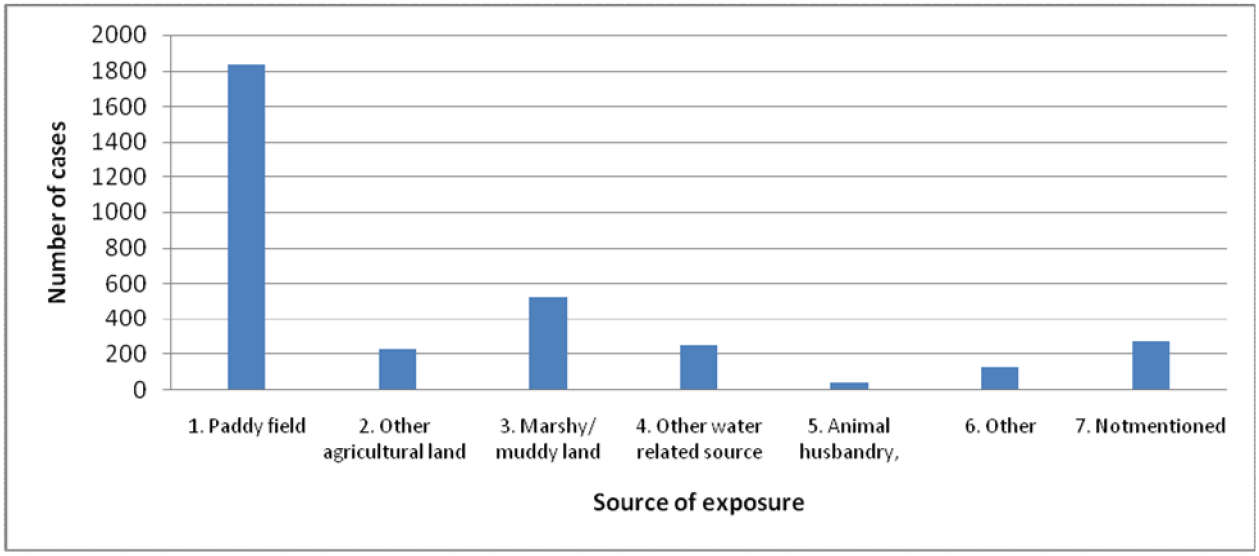
Geographical distribution of leptospirosis cases

Highest number of leptospirosis cases were reported from Gampaha district followed by Kalutara and Ratnapura districts

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: Source of exposure of leptospirosis cases –2015

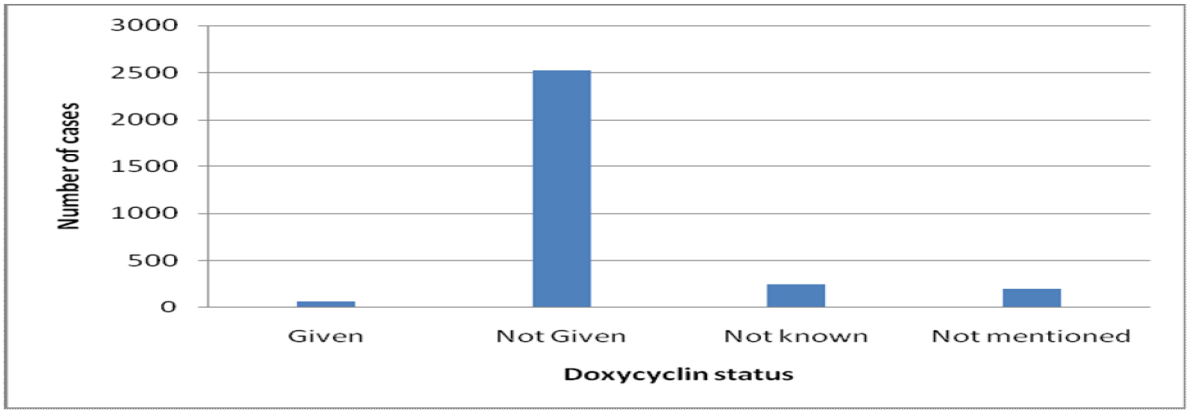


Prevention and control

Epidemiology unit carried out broad district/local level strategies to prevent and control the transmission of leptospirosis. Surveillance activities were intensified mainly during paddy cultivation seasons with MOOH, REE and central level involvement aimed at early detection of outbreaks. Chemoprophylaxis with Doxycyclin was given for selected high risk population under close monitoring by PHC 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 Epidemiologistsôconference.

Graph 5: Doxycyclin status of leptospirosi cases -2015



24. SUMMARY OF NOTIFIABLE DISEASES - 4th QUARTER 2016

Table 24: Summary of notifiable diseases

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	48	2	17	13	0	55	4	0	0	3	11	2	3323	193	97	4	17	0
Gampaha	35	4	8	64	0	61	9	0	1	4	15	1	1682	231	64	7	25	0
Kalutara	46	1	6	12	3	71	4	1	0	4	8	0	615	144	91	5	35	0
Kandy	24	2	3	7	0	8	2	0	0	17	4	1	578	120	74	7	17	4
Matale	16	0	7	1	0	9	0	0	0	0	10	1	267	31	8	3	35	8
Nuwara-Eliya	27	0	7	0	0	17	2	1	0	34	5	0	61	53	47	5	19	0
Galle	26	0	1	5	0	147	0	7	0	23	1	1	1284	81	53	6	9	0
ambantota	35	1	2	3	0	14	0	0	0	9	9	1	230	30	32	1	2	115
Matara	11	3	1	3	0	50	1	1	0	14	4	1	361	52	35	3	8	25
Jaffna	156	7	17	72	2	9	2	8	1	102	2	0	667	95	36	8	25	0
Kilinochchi	19	1	0	67	0	4	0	0	0	1	1	0	20	8	0	0	1	0
Mannar	9	0	2	3	0	1	0	1	0	3	0	0	113	8	0	0	1	0
Vavuniya	5	1	14	13	0	6	0	0	0	2	1	0	54	17	9	1	0	2
Mullaitivu	6	3	3	1	0	5	0	0	0	0	0	0	26	6	6	1	4	0
Batticaloa	80	2	14	5	1	14	2	3	1	0	3	0	157	34	35	2	7	0
Ampara	3	1	1	0	0	0	1	0	0	0	2	0	40	21	42	3	1	2
Trincomalee	9	0	2	5	0	11	0	0	0	4	13	0	149	35	40	6	7	8
Kurunegala	83	2	1	8	1	34	3	2	0	11	11	1	438	104	118	7	37	23
Puttalam	34	2	2	2	2	14	3	0	0	1	0	1	123	31	21	1	44	0
Anuradhapura	58	1	6	34	0	22	5	0	0	5	26	1	123	55	75	4	18	71
Polonnaruwa	16	0	0	2	0	5	1	1	0	1	2	1	88	25	44	3	7	29
Badulla	58	2	3	5	1	19	1	2	0	15	21	0	455	58	56	4	54	1
Moneragala	33	0	2	0	0	16	0	2	0	12	31	0	114	20	20	8	9	7
Ratnapura	59	6	7	1	0	158	2	0	0	11	55	1	612	110	75	4	43	0
Kegalle	18	3	2	12	0	29	1	0	0	14	10	1	292	85	81	8	21	1
Kalmunai	37	4	0	20	0	4	0	5	0	0	3	0	830	40	39	0	6	0
Total	**951**	**48**	**128**	**358**	**10**	**783**	**43**	**34**	**3**	**290**	**248**	**14**	**12702**	**1687**	**1198**	**101**	**452**	**296**

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.

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