Volume 56
January-March
2015

EPIDEMIOLOGICAL BULLETIN

SRI LANKA

First Quarter
2015

CONTENTS PAGE NO

EPIDEMIOLOGY UNIT

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

1. POLIOMYELITIS

Seventeen (17) Acute Flaccid cases were notified to the Epidemiology Unit during the 1st quarter 2015. This is lower than the reported AFP cases during the 1st quarter 2014, which is 24. 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 75 sentinel sites are currently functioning and last updated in 2014. All sentinel sites are expected to report immediately on AFP case admissions, to the Epidemiology Unit and to the Regional Epidemiologist of the respective area of patient's residence .

Majority of the cases (47%) were notified from the sentinel site hospital for AFP In the Western province: Lady Ridgeway Children's Hospital (LRH), TH Ragama. Most of these government hospitals are tertiary care centers receiving referrals from other hospitals and reported majority of AFP cases. 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 (2) were reported from Gampaha in the Western province, Galle in the Southern province and Badulla in the Uva province. Colombo,Matara, Hambantota, Matale, Nuwara Eliya, Ratnapura, Kegalle Kurunegala, Puttlam, Polonnaruwa, Anuradhapura belonged 1 AFP case each for the quarter. The complete list of distribution of AFP cases according to the province, district and MOH area is given in Table 02.

Table 01: Notification of AFP cases by sentinel hospitals -1st quarter 2015

Hospital	No: of cases reported
Lady Ridgeway Hospital	7
T.H.Karapitiya	2
G.H.Badulla	2
T.H.Ragama	1
T.H.Peradeniya	2
G.H.Matara	1
G.H.Nuwara Eliya	1
SBSCH	1
Total	17

Table 02 : Geographical distribution of AFP cases 1st quarter 2015

Province	District	MOH Area	Number of AFP cases
Western	Colombo	Colombo MC	1
	Gampaha	Gampaha	1
		Biyagama	1
Southern	Galle	Karandeniya	1
		Induruwa	1
	Matara	Weligama	1
	Hambantota	Walasmulla	1
Central	Matale	Raththota	1
	Nuwara Eliya	Kothmale	1
Sabaragamuwa	Ratnapura	Ratnapura	1
	Kegalle	Dehiowita	1
North Western	Kurunegala	Kotawehera	1
	Puttalam	Puttalam	1
North Central	Polonnaruwa	Hingurakgoda	1
	Anuradhapura	Horowpathana	1
Uva	Badulla	Welimada	1
		Badulla	1
Total			**17**

Seasonal Distribution of AFP Cases

Majority of cases were reported during the month of March (10 cases, 58.82%). No significant seasonal variation observed during the period.

Age and Sex Distribution of AFP cases

Majority of AFP cases (76.47%) were females during the 1st quarter 2015.During the 1st quarter 20154 the trend was different with majority being males.

Majority of AFP cases (76.47%) were between 1-9 years and the age—sex distribution of reported cases were given in table 03.

Table 03: Distribution of AFP cases by Age:

1st quarter 2015

Age Group	Sex		Total
	Male	Female	
<1 year old	0	0	0
1-4 year old	3	7	10
5-9 year old	1	2	3
10-15 year old	0	4	4
Total	**4**	**13**	**17**

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 24 cases of AFP are given in table 04.

Table 04: Final diagnoses of AFP patients reported during -1st quarter 2015.

Final Diagnoses	Frequency
GBS	12
Periodic Paralysis	1
Multiple Sclerosis	1
Meningoencephalitis	1
Radiculitis	1
T4 Vertibral Tumour	1
Total	17

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 and presence of ice in the container on receipt are the criteria to be completed to make the samples of 'good condition'.

Timely stool collection rate for the quarter was 64.7% .Hospitals contributed for late stool samples were LRH, TH Karapititya, SBSCH, BH Badulla, GH Nuwara Eliya and reasons identified in majority were transferring from other hospitals to referral centres beyond the expected duration.

2. MEASLES

Five hundred and thirty nine (539) suspected measles patients were reported during the first quarter 2015 and 374 of them were compatible with clinical case definition of "fever and maculopapular rash with one of the signs of cough, coryza or conjunctivitis". This number was little higher than the number reported during the previous quarter which was 345 suspected cases and 330 clinically confirmed cases. Measles incidence of 19/million population had been identified for clinically confirmed cases which were field investigated for special investigations.

Measles outbreak situation was started during the 1st quarter 2013 and continued after reduction of the peak with supplementary immunization activity conducted for 6-11 month old infants as an outbreak control measure since major proportion of affected were belonged to 6-11 months. But transmission of measles in the country was continuing with varying intensity with overall trend of gradual reduction was seen to date. These clinical cases were field investigated by the respective Medical Officers of the patients' residential areas. Case based field level investigation rate was 74% and special investigation forms were received at the Epidemiology Unit. Age categories according to vaccination status had been analysed, and relevant incomplete forms on vaccination status were returned to respective Regional Epidemiologists for clarifications and completeness.

Table 05: Number of Measles cases by district:

1st quarter 2015

Western Province reported the highest number of measles cases (200) followed by North Western province.

Measles vaccination was introduced in 1984 in Sri Lanka at the age of 9 months and the 2nd dose of measles introduced as MR vaccine at the age of 3 years in 2001. With marked reduction of measles transmission in the country, MMR vaccine was introduced with advancing the 1st dose to the 1 year of age and 2nd dose at the age of 3 years in 2011.

District	cases	District	cases
Colombo	74	Batticaloa	2
Gampaha	109	Ampara	1
Kalutara	17	Trincomalee	5
Kandy	10	Kurunegala	23
Matale	3	Puttalam	23
Nuwara Eliya	6	A'pura	25
Galle	19	Polonnaruwa	1
Hambnatota	4	Badulla	13
Matara	17	Moneragala	10
Jaffna	0	Ratnapura	19
Vavuniya	1	Kegalle	18

As with the outbreak of measles from 2013, a higher proportion of cases detected among 6-11 months aged infants. In 2014, this age category was investigated for measles serum antibody levels and detected lack of maternal antibodies for protection. This evidence leads to the decision of bringing down the age at 1st measles vaccination to 9 months of age from April 2015.

Of the total affected nearly 57% were in unvaccinated age groups [34% below 1 year and 23% above 29 years] who belong to measles vaccinations have not been recommended through EPI. But a significant proportion [27%, 109 cases] was in 16-29 year age category among those who were due and would have been received at least one dose after 1984. But the deficiency identified was the insufficient attention for laboratory confirmation of all cases. All affected individuals were not tested at the laboratory and of the suspected measles cases laboratory testing rate was around 50% during the 1st quarter.

3. LEPTOSPIROSIS

During the 1st Quarter 2015, 1130 cases and 23 deaths (CFR 2.03%) due to Leptospirosis were notified to the Epidemiology Unit compared to 815 cases and 20 deaths in the previous quarter and 734 cases and 07 deaths during corresponding quarter of 2014.

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

Table 06: Selected Characteristics of Leptospirosis Patients (%)- 1st quarter 2015.

Age Group	Sex	
	Male	Female
0 - 9 years	0.17	0.85
10 - 19 years	6.85	3.41
20 - 29years	18.75	6.83
30 - 39years	21.44	20.51
40 - 49years	20.56	25.64
50 - 59 years	21.96	23.93
>60years	10.54	18.80
Total	100.00	100.00

4. HUMAN RABIES

Ten cases of Human Rabies were notified to the Epidemiology Unit in the 1st quarter 2015 compared to 02 cases in the previous quarter and 3 cases in the corresponding quarter of year 2014.

All notified Human Rabies cases have been confirmed.

Animal Rabies

During this quarter, 124 dogs were reported positive for rabies, compared to 148 in the previous quarter and 178 positive in the same period in the last year. In addition the following animals were also reported positive;

Cats-26, Squirrel—02 , Domestic Ruminants-00

Rabies Control Activities

Dog vaccination - A total of 365080 dogs were immunized during the Quarter under review when compared to 595607 in the previous quarter and 254942 in corresponding Quarter of the last year.

Animal Birth control

Chemical- A total of 3194 female dogs were injected with birth control injections (Progesterone) during the quarter under review. **Surgical**– 30,900 female dogs were subjected to sterilization by surgical method during the quarter under review.

5. VIRAL HEPATITIS

In the 1st Quarter 2015, a total of 473 cases of Viral Hepatitis were reported to the Epidemiology Unit. This was in comparison to the 575 cases in the previous quarter and 390 cases in the corresponding quarter of 2014. Rathnapura (116 cases) reported the highest number of cases followed by Kandy District(62 cases).

6. ENTERIC FEVER

In the 1st Quarter 2015, a total of 319 cases of Enteric fever were reported to the Epidemiology Unit, compared to 388 cases in the previous quarter and 295 cases in the corresponding quarter of 2014. The district of Jaffna (122) reported the highest number of cases, followed by Kegalle (31 cases).

7. DYSENTERY

In the 1st Quarter 2015, a total of 1028 cases of Dysentery were reported to the Epidemiology Unit, in comparison to 2015 cases in the previous quarter and 941 cases in the corresponding quarter of 2014. Jaffna (193 cases) and Ratnapura (93 cases) reported the highest number of cases.

8. MALARIA

There were no indigenous malaria cases reported during the 1st quarter of 2015.The number of imported malaria cases detected during this period, shows a decrease when compared with the same period of year 2014.

9.JAPANESE ENCEPHALITIS (JE)

During the 1st quarter 201, 52 cases of clinically suspected Encephalitis were reported to the Epidemiology Unit through the routine disease notification system. Out of this, 34 cases were clinically confirmed by the Public Health Inspectors during their field investigations. During the 1st quarter of 2015, MRI has reported 4 lab confirmed JE cases. All 4 JE cases(100%) were investigated by the MOH . Among them 02 (50%) cases were over 50 years of age, another 01 (25%) was 6 years old and other 1(25%) was 4 years old.

Districts of Colombo, Rathnapura, Mannar and Badulla have reported one JE case each during 1st quarter 2015.

Table 08: Selected characteristics of Confirmed cases of JE -1st quarter 2015 (N=04)

Sex	**Male**	02 (50%)
	Female	02(50%)
Age group	< 1 y	00 (00%)
	1-10 y	02 (50%)
	11- 20	00 (00%)
	21-50Y	00 (00%)
	> 50 Y	02 (50%)
District	Colombo	01(25%)
	Mannar	01(25%)
	Ratnapura	01(25%)
	Badulla	01(25%)

Table 07: Results of Blood smear examination for malaria parasites - 1st quarter 2015

	1st quarter 2014	**1st quarter 2015**
No. of blood smears examined	264,147	269,255
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 Examined by District RMO - 1st quarter 2015

RMO	July	August	Sept.	Total
Colombo	6855	7341	6937	21133
Gampaha	3737	2074	2617	8428
Kalutara	1025	1522	813	3360
Kandy	3665	3361	3496	10522
Matale	2494	1597	1361	5452
Nuwara Eliya	273	180	203	656
Galle	1789	1897	1371	5057
Matara	1549	1836	2780	6165
Hambantota	2053	3538	2200	7791
Jaffna	5908	5691	5394	16993
Kilinochchi	3404	4544	3951	11899
Vavuniya	3293	3957	4610	11860
Mannar	2975	2705	3233	8913
Mullaitivu	1820	2186	1998	6004
Batticaloa	7818	6909	6845	21572
Ampara	1967	2058	1754	5779
Kalmunei	4052	4107	3863	12022
Trincomalie	3646	4320	3146	11112
Kurunegala	5575	5380	5690	16645
Maho	1624	1538	1198	4360
Puttalam	2333	2048	2308	6689
A'pura	5470	6020	5928	17418
Pollonnaruwa	3990	3875	4003	11868
Badulla	2206	1818	2033	6057
Monaragala	2669	3544	2299	8512
Rathnapura	2606	2653	2817	8076
Kegalle	1258	1270	1611	4139
TOTAL	86054	87969	84459	258482

Table 10: Morbidity and mortality due to DF/DHF – 1st quarter 2015

RDHS Division	Cases	Percentage (%)	Deaths
Colombo	3440	28.58	10
Gampaha	1564	12.99	01
Kalutara	562	4.66	01
Kandy	504	4.18	02
Matale	284	2.35	00
N' Eliya	75	0.62	00
Galle	338	2.80	02
Hambantota	125	1.03	01
Matara	168	1.39	00
Jaffna	945	7.85	01
Kilinochchi	32	0.26	00
Mannar	68	0.56	00
Vavuniya	55	0.45	00
Mulativu	61	0.50	00
Batticaloa	892	7.41	04
Ampara	21	0.17	00
Trincomalee	286	2.37	00
Kurunagale	615	5.11	01
Puttalam	374	3.10	01
A'pura	227	1.88	01
Polonnaruwa	108	0.89	00
Badulla	285	2.36	00
Moneragala	90	0.74	00
Ratnapura	375	3.11	01
Kegalle	197	1.63	00
Kalmunai	344	2.85	01
Total	12,035	100.00	27

Table 11: DHF Statistics from Department of Virology, MRI - 1st quarter 2015

Month	Clinically suspected cases of DF/DHF	Serologically Confirmed Cases of DF/DHF
January	85	34
February	246	85
March	361	109
Total	692	228

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

During the 1st Quarter 2015, 12,035 cases of DF/DHF and 27 deaths were reported (0.22% CFR) when compared to 15,140 cases of DF/DHF and 19 deaths (0.12% CFR) reported during the 4th Quarter 2014. Proportion of cases notified in January, February and March were 52.7%, 31.0%, and 16.29 % respectively.

Table 10 shows the distribution of DF/DHF cases and deaths in the RDHS divisions during the 1st quarter 2015.

Special surveillance data on 1238 confirmed cases were received and analyzed for the 1st quarter 2015. Age distribution of reported cases were <4 years of age in 133(10.74%), 5 - 9 years of age in 245 (19.78%), 10 - 14 years of age in 208(16.80%), 15 – 19 years of age in 126(10.17 %), 20 - 24 years of age in 107(8.64%), 25 - 29years of age in 99 (7.99%), 30 - 34 years of age in 81 (6.54%), 35 - 39 years of age in 63 (5.08%), 40 - 44 years of age in 33(2.66%), 45 - 49 years of age in 35 (2.82%), 50 – 54 years of age in 25 (2.01%), 55 - 59 years of age in 24(1.93 %), >60 years of age in 32 (2.58%).

According to the clinical findings majority of the reported cases 1124 (90.79%) were classified as dengue fever 8.56 % were classified as Dengue fever without shock,0.48% were Dengue fever with shock and unusual dengue category cases were not reported.

During the 1st quarter of 2015, 692 blood samples were tested using IgM capture ELISA test at the Department of Virology, MRI. From the total 228 (32.94%) samples were confirmed as positive (Table 11).

11. RUBELLA AND CONGENITAL RUBELLA SYNDROME (CRS)

One case of Rubella IgM positive babies were reported from the laboratory from serological investigations received at the Virology Laboratory for TORCH screen or from suspected CRS cases. This baby was identified without any congenital abnormalities and considered as Congenital Rubella Infection.

12. CHOLERA

No confirmed cases of cholera were reported to the Epidemiology Unit during the 1st Quarter 2015. Last case of cholera was reported in the country in January 2003.

13. TETANUS

Three tetanus cases were reported during 1st quarter 2015. Gampaha, Puttalam, and Anuradhapura were the MOH areas which reported Tetanus cases.

14. SURVEILLANCE REPORT ON AEFI

Surveillance of Adverse Events Following Immunization (AEFI) effectively continued in the 1st Quarter of 2015, has reached 97.6 % of completeness of reports, while 48.2% reports were received in time at the Epidemiology Unit indicating that compliance for the system by the MOOH yet to be improved. Jaffna, Galle, Kegalle, Mannar, Matale, Monaragala, Mullativu, Polonnaruwa, and Vavuniya, were able to send all reports. The best timeliness was reported from the Vavuniya district (83.3%) followed by Jaffna (77.8%) and Matale (71.8 %). (Table 11)

The highest percentage of nil reports were received from both Ampara and Vavuniya (50.0% each) followed by Galle district (40.0%), which is above two fold of the Sri Lanka average (20.1%) indicating the need for more attention for surveillance reporting form both MOH staff and hospitals. Jaffna district has no 'Nil return', followed by Kegalle (3.1%) indicating the good surveillance system in place. The highest rate (177.8 per 100,000 immunizations) of AEFI was reported from Jaffna district, while Colombo reported the highest number of 277 AEFI cases in the first quarter 2015.

For the first quarter, the highest number of AEFI (n= 1537) was reported against Pentavalent vaccine, whereas the highest rate of AEFI (838.5/100,000 doses administered) reported against DTP vaccine (Table 12). The rate of AEFI for Pentavalent (01st, 02nd & 03rd dose) is 597.2 per 100,000 doses administered. High Fever (905), Allergic Reaction (503), Nodule (483) are the leading AEFI reported. Highest numbers of fever cases reported were following Pentavalent (550 cases: 213.7 per 100,000 doses administered) and DPT (291 cases: 313.6 per 100,000 doses administered) vaccines. For Allergic reactions, it was largely due to PVV (162 cases: 62.9 per 100,000 doses administered), and DPT (124 cases : 133.6 per 100,000 doses administered).

Table 12: Completeness and Timeliness of Monthly Reporting and Receipt of " NIL" Reports of AEFI by RDHS Divisions –1st quarter 2015

DPDHS	% completeness	% Timely returns	% Nil Returns	No. of AEFI	AEFI Rate (100,000 vaccine doses)
Colombo	98.0	46.0	12.0	277	72.2
Gampaha	95.6	37.2	14.0	130	34.7
Kalutara	94.9	27.0	13.5	154	63.5
Kandy	100.0	48.5	14.7	169	59.0
Matale	94.4	71.8	15.4	89	81.9
Nuwara Eliya	94.1	45.9	10.8	148	96.8
Galle	100.0	58.3	40.0	118	66.8
Hambantota	94.4	55.9	11.8	146	107.1
Matara	94.1	60.4	12.5	122	66.7
Jaffna	100.0	77.8	0.0	257	177.8
Kilinochchi	83.3	10.0	20.0	22	55.2
Mannar	100.0	40.0	13.3	34	121.1
Vavuniya	100.0	83.3	50.0	30	83.6
Mullativu	100.0	40.0	13.3	42	124.3
Batticaloa	92.9	46.2	35.9	70	62.0
Ampara	76.2	25.0	50.0	43	73.3
Trincomalee	93.9	45.2	29.0	39	37.8
Kurunegala	96.3	65.4	19.2	193	61.0
Puttalam	94.4	20.4	23.5	82	55.5
A'pura	91.2	26.9	28.8	112	60.2
Polonnaruwa	100.0	14.3	14.3	55	58.7
Badulla	97.9	63.8	14.9	109	65.2
Moneragala	100.0	57.6	18.2	74	65.1
Ratnapura	92.6	28.0	32.0	107	50.3
Kegalle	100.0	66.7	3.0	122	78.8
Kalmunai	94.9	35.1	29.7	64	57.2
Sri Lanka	**95.6**	**48.2**	**20.1**	**2808**	**68.4**

Table 13 : Number of Selected Adverse Events by Vaccines – 1st quarter 2015

	BCG	OPV	PVV	DPT	MMR	LJE	DT	TT	aTd	Total number of AEFI re-ported
Total Number of AEFI Re-ported	11	4	1537	778	164	136	76	14	62	2782
AEFI reporting rate/100,000 doses administered	14.3	0.9	597.2	838.5	99.5	92.0	94.7	17.9	63.9	
High Fever (>39°C)		1	550	291	20	21	12	1	9	905
Reporting rate/100,000 doses administered		0.2	213.7	313.6	12.1	14.2	14.9	1.3	9.3	
Allergic reactions			162	124	94	81	24	4	14	503
Reporting rate/100,000 doses administered			62.9	133.6	57.0	54.8	29.9	5.1	14.4	
Severe local reactions	1		63	40	2	1	6	3	1	117
Reporting rate/100,000 doses administered	1.3		24.5	43.1	1.2	0.7	7.5	3.8	1.0	
Seizure (Febrile/Afebrile)		1	42	50	4	15	1			113
Reporting rate/100,000 doses administered		0.2	16.3	53.9	2.4	10.1	1.2			
Nodules	1	2	357	109	5	1	6	1	1	483
Reporting rate/100,000 doses administered	1.3	0.5	138.7	117.5	3.0	0.7	7.5	1.3	1.0	
Injection site abscess	6		146	22			2			176
Reporting rate/100,000 doses administered	7.8		56.7	23.7			2.5			
HHE										
Reporting rate/100,000 doses administered										

1-PentaValent Vaccine

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

15. TUBERCULOSIS

A total of 2386 Tuberculosis patients were registered for 1st Quarter 2015. Of this total 2180 were New pulmonary TB Patients. Out of all TB cases 1117 (46.8%) were New Smear Positive Pulmonary TB, while the balance 472 (19.8%) were New Smear Negative Pulmonary TB Patients and 591 (24.8%) from New Extra Pulmonary cases.

There were 117 (4.9%) Retreatment Cases and 89 (3.7%) were other cases. There were two HIV/TB positive patients found in the quarter, There was no Multi Drug Resistant TB patients detected. The distribution of Tuberculosis patients by RDHS division is given in Table 14.

Table 14: Tuberculosis Patients by RDHS Divisions -

1st quarter 2015

RDHS DIVISION	New				Retreatment & other	Total
	PTB sp+ve	PTB sp-ve	EPTB	Total		
Colombo	290	96	150	536	54	590
Gampaha	120	50	65	235	19	254
Kalutara	91	29	33	153	16	169
Kandy	56	62	61	179	12	191
Matale	21	5	12	38	3	41
Nuwara Eliya	26	9	14	49	3	52
Galle	52	17	27	96	5	101
Matara	22	16	13	51	7	58
Hambantota	15	4	9	28	1	29
Jaffna	25	15	15	55	7	62
Vavuniya	13	0	5	18	0	18
Batticaloa	23	5	14	42	4	46
Ampara	8	3	2	13	0	13
Kalmunai	15	14	4	33	5	38
Trincomalee	13	7	5	25	6	31
Kurunegala	59	40	29	128	37	165
Puttalam	19	10	23	52	3	55
Anuradhapura	36	8	9	53	3	56
Polonnaruwa	22	12	7	41	1	42
Badulla	32	13	18	63	8	71
Monaragala	12	2	4	18	1	19
Rathnapura	81	27	42	150	7	157
Kegalle	51	20	27	98	3	101
Mannar	5	6	0	11	1	12
Mulathivu	3	0	0	3	0	3
Kilinochchi	7	2	3	12	0	12
Total	**1117**	**472**	**591**	**2180**	**206**	**2386**

PTB-Pulmonary Tuberculosis
EPTB– Extra Pulmonary Tuberculosis
SP + ve - Sputum Positive
SP – 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 1st quarter 2015, is as follows;

		Total
A.	Yellow fever	989
B.	Meningococcal meningitis	109
C.	Oral polio	225

17. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 1st Quarter 2015 is given below.

1. Yellow Fever Surveillance

a. No. with valid certificate	-	134
b. No. without valid certificate & Deported	-	00
c. No. without valid certificate & Isolated	-	00

2. Disinfection of Aircrafts

a No. of flights arrived	-	6383
b No. of flights has to be disinfected	-	5573
c No. of flights disinfected	-	5180

3. Passenger Arrivals & departures - —

a No. Of passengers Arrived	-	1 020 028
b No.of Passengers Departures	-	—

4. Release of Human Remains

a. No. of human Remains released	-	123
b. No. of released to J.M.O. For post-mortern	-	03
c. No. Alleged suicide	-	07

5 Surveillance of other infectious diseases - —

6 Airport Sanitation

a No of sanitary inspections carriedout including Food establishment	-	19
b No. Of food samples taken under Food Act	-	00
c No. Found defective	-	00
d No. of court cases / prosecuted / Warned	-	00

7 Other Health Activities

a Poloi Vaccination No - of doses given	-	00
b Health talk given to staff	-	18
8 a. No. of water samples taken for Bacteriological Analysis	-	03
b. No. Reported Contaminated	-	00

18. LEPROSY

Table 15: Quarterly Return of Leprosy Statistics - 1st quarter 2015

1. National

	At the end of the quarter			Cumulative for end of the quarter		
	1st quarter 2015	1st quarter 2014	Diff (%)	2015	2014	Diff (%)
New patients detected	355	568	-213	355	568	-213
Children	37	50	-13	37	50	-13
Grade 2 Deformities	34	53	-19	34	53	-19
Multi-Bacillary	159	280	-121	159	280	-121
Females	141	211	-70	141	211	-70

2. Districts

District	New patients	G2-Deformity	Children	MB	Females
Central	14	0	2	10	3
Kandy	10	0	1	8	2
Matale	0	0	0	0	0
NuwaraEliya	4	0	1	2	1
Eastern	**36**	**5**	**3**	**17**	**17**
Ampara	6	0	0	2	2
Batticaloa	19	4	1	9	10
Kalmunai	9	0	1	4	4
Trincomalee	2	1	1	2	1
Northern	**11**	**1**	**2**	**5**	**7**
Jaffna	7	1	2	2	5
Kilinochchi	1	0	0	1	1
Mannar	2	0	0	1	1
Vavuniya	1	0	0	1	0
Mullaitivu	0	0	0	0	0
North Central	**26**	**4**	**1**	**15**	**9**
Anuradhapura	12	2	0	9	4
Pollonnaruwa	14	2	1	6	5
North Western	**34**	**4**	**3**	**19**	**13**
Kurunegala	14	3	0	7	6
Puttalam	20	1	3	12	7
Sabaragamuwa	**20**	**4**	**1**	**11**	**3**
Kegalle	3	1	0	2	0
Rathnapura	17	3	1	9	3
Southern	**57**	**5**	**4**	**27**	**24**
Galle	24	2	2	13	12
Hambanthota	19	2	2	8	8
Matara	14	1	0	6	4
Uva	**6**	**2**	**0**	**3**	**2**
Baddulla	2	0	0	1	1
Monaragala	4	2	0	2	1
Western	**151**	**9**	**21**	**52**	**63**
Colombo	65	3	11	26	27
Gampaha	42	2	6	14	20
Kalutara	44	4	4	12	16
Sri Lanka	**355**	**34**	**37**	**159**	**141**

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 –1st quarter 2015

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]		43	16	59	43	16	59
AIDS		7	2	9	7	2	9
Syphilis	Early Syphilis[2]	38	15	53	38	15	53
	Late Syphilis[3]	159	87	246	159	87	246
	Congenital Syphilis[4]	0	2	2	0	2	2
Gonorrhoea[5]		107	31	138	107	31	138
Ophthalmia Neonatorum[6]		0	0	0	0	0	0
Non specific cervicitis/urethritis		138	411	549	138	411	549
Chlamydial infection		2	1	3	2	1	3
Genital Herpes		295	394	689	295	394	689
Genital Warts		261	190	451	261	190	451
Chancroid		2	3	5	2	3	5
Trichomoniasis		6	21	27	6	21	27
Candidiasis		245	394	639	245	394	639
Bacterial Vaginosis		0	310	310	0	310	310
Other sexually transmitted diseases[7]		81	43	124	81	43	124
Non venereal		822	438	1270	822	438	1270

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 1st QUARTER 2015

Table 17: Bacteriological report, MRI 1st quarter 2015.

	JUL	AUG	SEPT
(A) CHOLERA			
No. of stool specimens Examined	114	11	51
No. of positives	0	0	0
(B) SALMONELLA			
Blood– No. Examined	243	220	283
S.typhi	0	0	0
S.paratyphi A	0	0	0
Stools—No. examined	138	41	69
S.typhi	0	0	0
S.paratyphi A	0	0	0
Others	4	3	1
(C) SHIGELLA			
No. Examined	138	41	69
Sh.flexneri 1	0	1	0
Sh.flexneri 2	0	0	0
Sh.flexneri 3	0	0	0
Sh.flexneri 4	0	0	0
Sh.flexneri 5	0	0	0
Sh.flexneri 6	0	0	0
(D) ENTEROPATHOGENIC E.COLI			
No.Examined	1	4	2
No.+ve	0	0	0
(E) CAMPYLOBACTER			
No.Examined	22	12	21
No. Positive	0	0	0
(F) ISOLATES			
Clinical	8	5	11
S. Typhi	0	0	0
S. Paratyphi A	0	0	0
Other Salmonella	1	3	1
Shigella spp	1	0	0

21. SURVEILLANCE OF MENINGITIS– 1st quarter 2015

Meningitis is a notifiable disease condition in Sri Lanka since year 2005. During the 1st quarter 2015, 185 suspected meningitis cases were reported to the Epidemiology Unit through the routine disease notification system .

Out of this 161 cases were clinically confirmed by the Public Health Inspectors during their field investigations. Highest number of meningitis cases were reported from the Nuwara Eliya district (17) followed by Gampaha (13) and Kalutara (12) districts.

.Forty seven percent of the clinically confirmed meningitis cases belonged to the age group less than one year, another 24% belonged to the age group 1-5 years and 11% belonged to age group 6 – 14 years. Sixty eight percent of the clinically confirmed cases were males and 32% were female.

Table 18: Summary findings for special investigations carried out for clinically confirmed cases of Meningitis up to 30th March 2015.

CSF Culture Report		
CSF Culture	Number	(%)
CSF Reports available	32	42%
No Growth	32	
Culture results not known	41	54%
Not done	02	02%
Total	75	100%
Final outcome of the patient		
Outcome	Number	(%)
Cured	73	97%
Died	**02**	02%
Total	**75**	**100%**
Final Diagnosis (based on clinical and lab findings)		
Diagnosis	Number	(%)
Culture confirmed	00	00%
Probable bacterial meningitis	06	08%
Probable viral meningitis	01	01%
Suspected Meningitis	68	90%
Total	**75**	**100%**

22. INFLUENZA SURVEILLANCE-1st quarter 2015

Human Influenza surveillance

Surveillance of human influenza is carried out under 2 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 4 sentinel hospitals. Respiratory samples are analyzed at the National Influenza Center (NIC), Medical Research Institute (MRI).

Epidemiological Component

ILI Surveillance

In the 1st quarter of year 2015, sixteen hospitals out of nineteen have reported ILI data with a reporting rate of 84.2%. A total of 14011 ILI cases were reported, accounting for 1.24% of the all OPD visits (n=1 126 021).

The highest number of ILI cases were reported from Teaching Hospital Anuradhapura (n=3216, 22.95%) and the majority of the patients were in the age group 15 – 49 years (n=5052, 36.05%).

SARI Surveillance

During 1st quarter 2015 proportion of admissions due to SARI out of all admissions had ranged from 0.53% (in March in TH Ragama) to 15% (in February in DGH Matara).

Laboratory Component

ILI Surveillance

A total of 228 ILI respiratory samples were received by the MRI from sentinel hospitals during the 1st quarter of 2015; 61 samples in January, 56 in February and 111 in March with a positivity rate (yield) of 21.9% (Table 21). IDH had sent the highest number of samples (n=31), followed by TH Batticaloa (n=28), NHSL (n=27), TH Anuradhapura (n=25) and GH Ratnapura (n=25), (Table 19). All ILI sentinel hospitals except TH Jaffna and GH Chilaw had sent samples within the quarter. Influenza B was the predominant circulating Influenza viral strain identified during the quarter, followed by A(H3N2). (Table 21).

SARI Surveillance

A total of 46 samples were sent to the MRI during the 1st quarter of year 2015, by all SARI sentinel hospitals except TH Peradeniya with a positivity rate (yield) of 8.7%.(Table 22) . Lady Ridgeway Hospital for children had sent the highest number of samples (n=25) followed by General Hospital Matara (n=17) (Table 20).

Influenza B and A(H3N2) were the two predominant circulating Influenza viral strains identified. (Table 22).

Table 19: The monthly performance of sentinel hospitals in the laboratory component of the ILI surveillance in the 1st quarter of the year 2015.

	January	February	March	Total
NHSL	10	10	07	27
CSTH	03	03	02	08
IDH	16	00	15	31
GH Nuwara Eliya	00	06	09	15
TH Karapitiya	00	04	18	22
TH Jaffna	00	00	00	00
TH Batticaloa	07	06	15	28
TH Kurunegala	00	05	09	14
GH Chilaw	00	00	00	00
TH Anuradhapura	05	10	10	25
GH Polonnaruwa	05	05	08	18
GH Badulla	05	02	08	15
GH Ratnapura	10	05	10	25
Total	61	56	111	228

Table 20: Monthly performance of sentinel hospital in the laboratory component of the SARI surveillance in the 1st quarter of the year 2015

Institution	January	February	March	Total
CNTH Ragama	02	00	02	04
TH Peradeniya	00	00	00	00
GH Matara	02	02	13	17
LRH	14	07	04	25
Total	18	09	19	46

Table 21: Types of Respiratory Viruses Isolated in ILI samples in the 1st quarter of the year 2015

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(%)
January	61	19	31.1%	8(42.1%)	0(0%)	5(26.3%)	3(15.7%)	11(57.9%)
Feb	56	13	23.2%	4(30.7%)	0(0%)	2(15.4%)	2(15.4%)	9(69.2%)
March	111	18	16.2%	7(38.9%)	5(27.9%)	1(5.6%)	1(5.6%)	11(61.1%)
Total	228	50	21.9%	19(38%)	5(10%)	8(16%)	6(12%)	31(62%)

Table 22: Types of Respiratory Viruses Isolated in SARI Samples in the 1st quarter of the year 2015

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
January	18	2	11.1%	0(0%)	0(0%)	0(0%)	0(0%)	2(100%)
February	9	1	11.1%	1(100%)	0(0%)	1(100%)	0(0%)	0(0%)
March	19	1	5.26%	1(100%)	0(0%)	1(100%)	0(0%)	0(0%)
Total	46	4	8.7%	2(50%)	0(0%)	2(50%)	0(0%)	2(50%)

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 2015

Month	No. of samples		Districts samples were collected from
	Pooled fecal samples	Serum samples	
Jan.	1130	873	Colombo, Gampaha, Vavuniya, Puttalam, Ratnapura, Polonnaruwa, Kurunegala, Anuradhapura, Jaffna, Trincomalee, Kalutara, Badulla
Feb.	1203	798	Colombo, Gampaha,Puttalam, Vavuniya, Kegalle, Polonnaruwa, Anuradapura, Badulla, Jaffna, Kalutara, Matale, kandy, Kurunegala.
Mar.	1023	352	Colombo, Gampaha, Puttalam, Kegalle, Polonnaruwa, Trincomalee, Jaffna, Hambantota, Kalutara, Kurunegala
Total	3356	2023	

23. HUMAN RABIES SURVEILLANCE REPORT – 2014

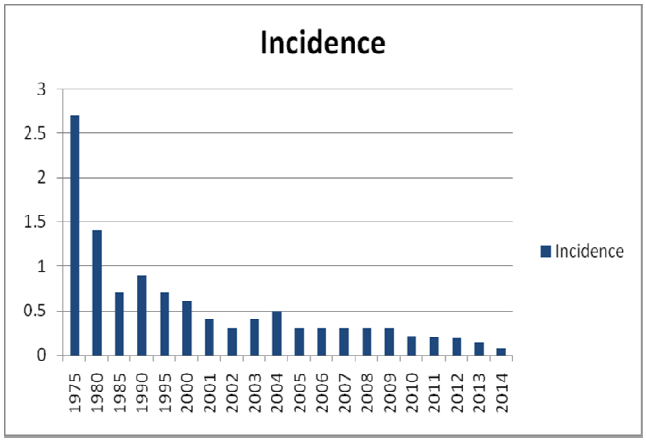
Human Rabies surveillance

The Epidemiology Unit is the national centre for disease surveillance and carries out all surveillance activities related to human rabies in the country through its wide network at the regional and divisional levels.

Human rabies is a notifiable disease in Sri Lanka. The number of human rabies deaths has declined over the last few decades from 377 (incidence - 2.7 per 100,000 population) in 1975 to 19 (incidence - 0.08 per 100,000 population) in 2014 (Figure 01).

In 2014, all cases were reported through the routine notification system, and the majority was confirmed by laboratory testing and the others were clinically confirmed as human rabies. Special investigations were carried out for 17 of these cases.

Figure 1. Incidence of human rabies per 1000,000 population 1991 to 2014



In the year 2014, the highest number of cases (N=5) was notified from Gampaha district (Table 24).The highest percentage of cases, 42% (8) were in the age group of 20-59 years (Table 25). A similar pattern in age distribution was noted during 2001 – 2013 period, and a male predominance of cases was observed with an approximate male: female ratio of 3:1 (Table 26).

Dog was the main animal exposed to, among 17 cases (94%) and out of them the majority (n=13, 72%) were exposed to stray dogs (Tables 28). A gradual decrease in exposure to household pets and neighbors' pets among those exposed to dogs is observed over time (Tables28).

The Public Health Veterinary Services (PHVS)

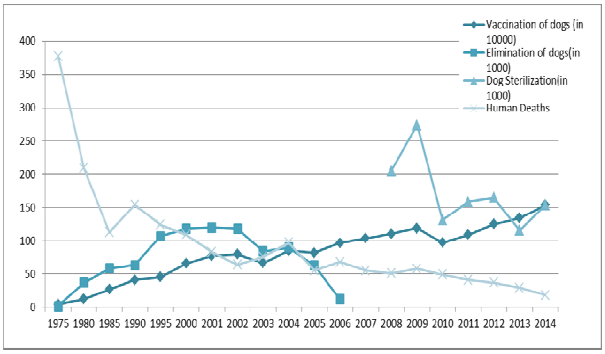
The PHVS is responsible for control and prevent human rabies in the country. The objectives of the PHVS are to ensure protection for those exposed to suspected rabies infection, to ensure protection for those who are at a higher risk of contacting rabies, to establish herd immunity in animal reservoirs with special emphasis on dogs, to control the population of animal reservoirs with special emphasis on dogs through appropriate methods and remove all rabies suspected dogs humanely

Since the National Rabies Control Programme commenced in 1975, vaccination and elimination of dogs were strengthened to a greater extent; dog vaccination has increased significantly from 1975 to 2014 (Table 29).

Dog vaccination not only protects the animal, but also makes the public less susceptible to human rabies by arresting the transmission of virus among dogs. However, partial and ad hoc dog vaccination practice may lead to an increase in the risk of human rabies, particularly due to the false trust on the safety of the animal.

Though the public support for dog vaccination is remarkable, there is resistance for dog elimination. Similar to dog vaccination, stray dog elimination was increased steadily from 1975 to 2001. But since 2006, local government authorities have completely stopped the dog elimination activities. Surgical and chemical dog sterilization (DMPA injection) are the two methods adopted for dog population control since discontinuation of dog elimination in 2006. On average around 135,000 surgical sterilizations and 48,000 chemical sterilizations have been performed annually during the last 07 years. A clear inverse relationship is observed between dog vaccination and human deaths due to rabies over the years. This inverse relationship with human deaths is also observed for dog sterilization and dog elimination (Figure 2). However this observed reduction of deaths could be confounded by the increasingly large number of post exposure treatments given (PET) for patients exposed to suspected rabid animals. The fact that the positivity rates of animal brains tested (the majority of which are dogs) remaining almost static with an average of around 55%, over same period favours the presence of such possible confounding factors for the observed inverse relationship between human rabies deaths and dog vaccination. Clear conclusions cannot be made due to absence of data on PET and dog bite patterns.

Figure 2. Trends of dog immunization, dog population control activities and human rabies deaths



Source: PHVS, Epidemiology Unit

Table 30 shows the data on human brains tested for rabies at the laboratory of the Medical Research Institute, Colombo.

Most of the deaths may have been prevented, if PET was administered as recommended. This could be achieved through increased public awareness on PET, appropriate referral of animal exposure victims for PET by general practitioners and proper PET practices at the hospitals. Administration of PET should be reviewed regularly through clinical audits.

Opportunities of exposure to rabid animals are to be minimized by integrated dog population control and dog vaccination activities. Periodic review of the efficacy of dog vaccination is an area for future research. Strengthening legislation and increasing responsible dog ownership among public are equally important in rabies control.

Table 24: Number of confirmed cases of human rabies by district–2014 (N=19)

Distract	Number of Cases confirmed	Rate per 100,000 Population
Anuradhapura	1	0.11
Batticaloa	1	0.19
Colombo	0	0.00
Galle	1	0.09
Gampaha	6	0.26
Jaffna	0	0.00
Kalmunai	0	0.00
Kalutara	2	0.16
Kandy	1	0.07
Kilinochchi	0	0.00
Kurunegala	0	0.00
Mannar	0	0.00
Matale	0	0.00
Moneragala	1	0.22
Mulaitivu	2	0.21
Puttalam	3	0.40
Ratnapura	1	0.09
Trincomalee	0	0.00
Vavuniya	0	0.00
Sri Lanka	19	

Source: Special investigations on human rabies cases

Table 30 shows the data on human brains tested for rabies at the laboratory of the Medical Research Institute, Colombo.

Most of the deaths may have been prevented, if PET was administered as recommended. This could be achieved through increased public awareness on PET, appropriate referral of animal exposure victims for PET by general practitioners and proper PET practices at the hospitals. Administration of PET should be reviewed regularly through clinical audits.

Opportunities of exposure to rabid animals are to be minimized by integrated dog population control and dog vaccination activities. Periodic review of the efficacy of dog vaccination is an area for future research. Strengthening legislation and increasing responsible dog ownership among public are equally important in rabies control.

Table 25: Age distribution of confirmed human rabies cases, 2001-2010 (N=17)

Age group	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<1 year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-4years	8	2	6	3	0	2	3	3	1	2	0	2	0	0
5-19years	17	15	19	17	11	18	6	9	9	7	7	6	6	3
20-59 years	31	29	48	46	30	32	35	31	38	29	21	22	16	9
60 & over	10	10	3	16	9	16	11	8	10	12	13	9	3	5

Source: Special investigations on human rabies cases

Table 26: Sex distribution of confirmed human rabies cases, 2001 - 2010 (N=17)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Male	51	38	58	59	38	54	37	40	42	39	31	32	11	12
Female	15	18	18	22	12	14	18	11	16	11	10	7	14	5

Source: Special investigations on human rabies cases

Table 27: Distribution of human rabies cases by type of animal, 2001 – 2010 (N=17)

Animal	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Dog	49	35	63	69	42	58	45	43	48	41	38	27	20	16
Cat	5	6	4	2	1	1	4	2	3	3	0	2	1	0
Other	3	15	4	2	0	2	0	4	1	0	1	1	1	1
Unknown	9	6	5	7	7	7	6	2	6	6	0	1	0	0

Source: Special investigations on human rabies cases

Table 28: Distribution of human rabies cases by dog ownership, 2001 – 2014 (N=16)

Type of animal	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Household Pet	34	29	18	13	11	13	10	13	8	15	7	7	10	3
Neighbors' Pet	6	4	9	6	8	11	4	5	3	6	3	3	3	1
Stray	16	18	35	36	24	28	21	24	8	18	21	16	7	12
Unknown	10	5	14	24	7	16	20	9	39	11	4	10	4	0

Source: Special investigations on human rabies cases

Table 29: Rabies control activities, animal brain testing and human rabies deaths,1975 – 2010

Year	Vaccination of dogs	Elimination of dogs	Surgical dog sterilization	Chemical dog sterilization	Animal brains examined at MRI		Human rabies deaths	
					Number	Positive rate	Number	Rate per 100,000 population
1975	42252	1610	-	-	456	64.7	377	2.7
1980	120143	36845	-	-	420	52.5	209	1.4
1985	268561	58238	-	-	344	55.5	113	0.7
1990	412586	63233	-	-	963	70.2	154	0.9
1995	452828	106862	-	-	1217	69.7	124	0.7
2000	657597	117790	-	-	559	88.5	109	0.6
2001	770375	119761	-	-	NA	NA	83	0.4
2002	797565	117790	-	-	NA	NA	64	0.3
2003	664493	84350	-	-	NA	NA	76	0.4
2004	844123	89530	-	-	NA	NA	98	0.5
2005	818162	62693	-	-	NA	NA	55	0.3
2006	964242	12091	-	-	1413	57.9	68	0.3
2007	1037617	-	-	-	1412	53.3	55	0.3
2008	1103258	-	119546	85339	1627	53.1	51	0.3
2009	1189157	-	220280	53931	1479	57.2	58	0.3
2010	972541	-	90764	39888	1534	45.3	50	0.2
2011	1092384	-	104998	53419	1519	41.01	41	0.19
2012	1247777	-	115664	49101	1587	45.2	37	0.18
2013	1339532	-	146437	36372	1536	49.6	29	0.14
2014	1533193	-	134943	18664	1425	52.4	19	0.08

Source: PHVS, MRI, Epidemiology Unit

Table 30: Human brains tested for rabies, 2003-2010

Year	No. brains tested	No. brain positive	Positive Rate (%)
2003	33	15	45
2004	42	24	57
2005	28	20	71
2006	44	31	70
2007	38	32	84
2008	43	30	70
2009	48	44	91
2010	42	38	90
2011	34	31	91
2012	38	32	84
2013	32	27	84
2014	28	19	67.8

24. SUMMARY OF NOTIFIABLE DISEASES - 1ST QUARTER 2015

Table 31

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	60	4	25	47	3	80	86	4	0	2	14	4	3440	180	154	5	12	0
Gampaha	24	3	10	10	0	145	123	0	1	3	55	0	1564	232	57	4	7	0
Kalutara	31	3	14	64	1	98	17	2	0	0	9	1	562	91	91	9	11	0
Kandy	46	3	11	2	0	20	20	1	0	23	62	3	504	148	77	4	4	1
Matale	19	0	3	3	0	18	4	0	0	4	15	0	284	43	7	1	2	3
Nuwara-Eliya	85	1	5	0	0	8	11	1	0	25	32	0	75	43	19	3	19	0
Galle	27	0	3	8	0	81	37	7	1	24	4	0	338	117	78	7	16	0
Hambantota	10	0	4	4	0	30	4	2	0	14	15	0	125	32	31	2	4	87
Matara	26	3	4	44	0	61	31	0	0	17	11	0	168	49	79	7	8	20
Jaffna	193	7	122	21	1	9	0	23	0	449	7	5	945	85	59	6	5	0
Kilinochchi	31	0	4	25	1	1	0	0	0	7	0	1	32	13	8	0	0	0
Mannar	4	0	4	1	0	8	0	0	0	14	0	0	68	6	0	0	0	0
Vavuniya	8	4	21	2	1	9	2	0	0	11	1	0	55	20	6	0	3	1
Mullaitivu	10	2	3	1	0	2	0	0	0	6	1	0	61	10	1	1	2	2
Batticaloa	79	4	6	0	0	2	10	1	0	0	0	0	892	55	12	2	10	0
Ampara	17	0	0	0	0	6	3	0	0	0	1	0	21	14	71	3	3	0
Trincomalee	11	0	14	24	0	6	6	0	0	2	4	1	286	38	20	2	2	0
Kurunegala	54	2	3	9	1	93	23	1	0	12	13	2	615	86	142	9	5	26
Puttalam	13	3	1	6	0	18	35	0	1	7	1	2	374	13	27	2	6	1
Anuradhapura	20	1	2	34	0	103	37	0	1	10	7	4	227	44	50	5	11	71
Polonnaruwa	21	2	5	0	0	37	5	0	0	1	3	0	108	38	45	3	11	33
Badulla	46	3	3	5	2	22	23	2	0	30	43	0	285	53	39	5	16	4
Moneragala	35	1	8	2	1	83	11	1	0	23	20	1	90	35	32	6	5	8
Ratnapura	93	3	12	1	0	110	22	2	0	22	116	2	375	128	33	4	12	4
Kegalle	27	4	31	3	0	78	29	0	0	14	39	0	197	99	66	8	14	0
Kalmunai	42	0	1	14	0	2	0	2	0	0	0	0	344	60	40	4	2	0
Total	**1032**	**53**	**319**	**330**	**11**	**1130**	**539**	**49**	**4**	**720**	**473**	**26**	**12035**	**12035**	**1244**	**102**	**190**	**261**

No polio cases. (from AFP surveillance system).

The Bulletin is compiled and distributed by the:

Epidemiology Unit, Ministry of Health, 231, De Saram Place, Colombo 10.

Telephone : 2695112, FAX No : 2696583, E-mail: chepid @ sltnet.lk

This document is available on the internet www.epid.gov.lk.

Figures given may be subject to revision.

The editor welcomes accounts of interesting cases, outbreaks or other public health problems of current interest to health officials.

Such reports should be addressed to:

The Editor, Quarterly Epidemiological Bulletin

Epidemiology Unit, P.O. BOX 1567, Colombo, SRI LANKA, SRI LANKA.

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO)

ON STATE SERVICE

DR. P. PALIHAWADANA

CHIEF EPIDEMIOLOGIST

EPIDEMIOLOGY UNIT

231, DE SARAM PLACE

COLOMBO 10.

ISSN NO: 2345-9360