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Third Quarter 2006

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1. POLIOMYELITIS

Twenty seven (27) Acute Flaccid Paralysis (AFP) cases were notified to the Epidemiology Unit during the 3rd quarter 2006. In comparison, during the 3rd guarter of 2005 and 2004, 14 and 21 AFP cases were reported respectively. The reported number of cases at completion of the 3rc quarter 2006 far exceeded the expected number of AFP cases at this point which was 80 according to WHO surveillance criteria. One hundred and six (106) AFP cases are expected for a year, which makes up a non-polio AFP rate of 2 per every 100,000 under 15-year olds. By the end of the 3rd guarter2006, 96 AFP cases have been reported which yields a much higher rate than required.

Notification of AFP Cases from Hospitals

Lady Ridgeway Hospital for Children (LRH), Colombo has again reported the highest number of cases (6 cases i.e. 22%) out of the 55 sentinel sites in the country. The main sentinel site for AFP, LRH is a tertiary care center which receives referrals from other hospitals in the country. Teaching Hospital Kandy reported 5 AFP cases for the quarter and accounted for 19% of the caseload for the quarter. General Hospital Ratnapura and Teaching Hospital Batticoloa reported 4 (15%) and 3 (11%) AFP cases respectively. Other hospitals that notified the AFP cases in the 3rd quarter are as follows:

Hospital	No. of cases
NHSL	2
TH Karapitiya	1
TH Jaffna	2
GH Badulla	2
GH Polonnaruwa	1
GH Anuradhapura	1
BH Chilaw	1
Nawaloka Hospital	1

Distribution of AFP Cases by Provinces, Districts & MOH Areas

Gampaha district in the Western Province and Ratnapura of Sabaragamuva Province have reported 3 AFP cases each for the quarter. From the Northern Province both Kilinochchi and Jaffna districts reported their first AFP cases (one each) within the quarter. All districts in the Eastern Province except Trincomalee reported AFP cases in the 3rd quarter. Several other districts in the country did not report AFP cases for the quarter. All heads of sentinel sites in these districts were sent reminders to strengthen AFP surveillance activities. The complete list of distribution of AFP cases by the province, district and MOH area is given below.

Table 1.

GEOGRAPHICAL DISTRIBUTION OF AFP CASES 3RD QUARTER 2006

Province	District	MOH Area	Num- ber of AFP cases
Western	Colombo	-	0
	Gampaha	Ja Ela	1
		Katana	1
		Mahara	1
	Kalutara	Bandaragama	1
Southern	Galle	Yakkalamulla	1
		Udagama	1
	Matara	Devinuwara	1
Central	Kandy	Werellagama	1
	Nuwara Eliya	Nuwara Eliya	1
		Walapane	1
Sabara- gamuva	Ratnapura	Kuruwita	1
		Kahawatta	1
		Balangoda	1
	Kegalle	Dehiowita	1
N o r t h Western	Puttalam	Puttalam	1
		Dankotuwa	1
Eastern	Ampara	Dehiattakandiya	1
	Kalmunai	Samanthurai	1
		Kalmunai South	1
	Batticoloa	Chenkaladi	1
		Vavunativu	1
N o r t h Central	A n u r a d - hapura	Kekirawa	1
	Polonna- ruwa	Dimbulagala	1
Uva	Badulla	Meegahakivula	1
	Moneragala	Siyambalan- duwa	1
Nothern	Kilinochchi	Kilinochchi	1
	Jaffna	Kayts	1

Seasonal Distribution of AFP Cases

August recorded the highest number of the AFP cases reported in the 3rd quarter. The number reported for the month was 12 (44%). In comparison only 5 cases were reported for the same month in 2005. In July and September, 6 (22%) and 9 (33%) cases were reported respectively.

Distribution of AFP Cases by Age and Sex

Two thirds of the AFP cases (18 cases i.e.67%) reported in the 3^{rd} quarter this year were older children aged 5 - 15 years. In comparison only 50% of the AFP cases (8) reported in the 3^{rd} quarter 2005 were aged 5 - 15 years. Eight (29%) children belonged to 1 - 4 year age group and there was only one child aged less than 1 year.

Over three fourth of the AFP cases (21cases i.e. 78%) in the 3^{rd} quarter 2006 were boys. This is in contrast to the same quarter in 2005 where 81% of the cases reported were girls. More boys than girls were affected in all the age groups. In the corresponding quarter of 2005 female cases were predominant in all the age categories.

Table 2 shows the age and sex distribution in 3^{rd} quarter 2006.

Table 2.

AGE AND SEX DISTRIBUTION OF AFP CASES 3RD QUARTER 2006

Age Group	5	Total	
	Male	Female	
<1 year old	1	0	1
1-4 year old	5	3	8
5-9 year old	8	1	9
10-15 year old	7	2	9
Total	21	6	27

Laboratory Surveillance of AFP Cases

Two stool samples collected within 14 days of the onset of paralysis are required at the Medical Research Institute for polio virology. 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 make the samples of 'good condition'.

Twenty three cases out of the 27 AFP cases (85%) reported in the 3rd quarter 2006 had two timely stool samples sent to MRI for polio

virology. Four AFP cases reported (15%) had stool samples collected late from respective institutions. However Medical Research Institute received at least two stool samples from all 27 cases in this quarter regardless of the timeliness.

National Polio Expert Committee

The National Polio Expert Committee consists of experts from the fields of paediatrics, virology, epidemiology, clinical neurology and neurophysiology. The expert committee meets once in every quarter of the year to discuss AFP cases that could not be discarded on laboratory results alone. In 3rd quarter 2006 3 AFP cases, which had persistent residual paralysis with negative virology results from samples collected late, were forwarded to the Expert Committee. In the corresponding quarter 2005, 2 such AFP cases were presented to the committee for deliberation.

2. CHOLERA

No confirmed cases of cholera were reported to the Epidemiological Unit In the 3rd quarter of 2006.

No confirmed cases of cholera were reported in the previous quarter or in the corresponding quarter of last year.

3. TETANUS

During the 3rd quarter of 2006, 8 cases of tetanus were notified to the Epidemiological Unit in comparison to 20 cases reported during the previous quarter and 12 cases reported during the corresponding quarter of 2005.

Out of the notified cases in the 3rd quarter 2006, 7 were investigated and 4 cases (one each from the districts of Gampaha, Batticaloa, Hambantota and Badulla) were confirmed as tetanus. A case reported from Hambantota had been fatal. All the confirmed cases were over the age of 50 years. No cases of neonatal tetanus were reported during this quarter.

4. MEASLES

During the 3rd quarter of 2006, 15 cases of measles were notified to the Epidemiological Unit compared to 10 cases notified during the previous quarter and 2 cases notified in the corresponding quarter of last year.

During the 3rd quarter 2006, 11 cases were investigated and 05 were confirmed as measles (Table 3).

Table 3.

SELECTED CHARACTERISTICS OF CONFIRMED CASES OF MEASLES – 3^{RD} QUARTER 2006. (N = 06)

Sex	Male	1
Sex	Female	5
Age group	< 1 *	1
	1-5	2
	>5	3
	Gampaha	1
	Hambantota	1
District	Matara	1
	Kegalle	2
	Nuwara Eliya	1
Immunization status	Immunized**	2
	Non immunized	4

*an infants aged 5 months ** two children aged 13 months and 16 months

5. LEPTOSPIROSIS

In the 3rd quarter of 2006, 281 leptospirosis cases were notified to the Epidemiological Unit compared to 475 cases in the previous quarter (2nd quarter 2006) and 385 cases during the corresponding quarter of the previous year. Among the reported cases 77 were confirmed as leptospirosis based on laboratory reports.

Out of the total cases reported during this quarter, majority were from the districts of Kegalle (27%) and Matara (12%). The MOH areas Kegalle, Warakapola and Galigamuwa in the Kegalle district reported 16, 14 and 13 cases of leptospirosis respectively, being the largest reported case load.

6. HUMAN RABIES

Fifteen cases of human rabies were notified to the Epidemiological Unit in the 3rd quarter of 2006, compared to 15 cases in the previous quarter and 15 cases in the corresponding quarter of the last year.

Highest number of rabies cases were reported from Matara, Ratnapura, Badulla and Jaffna districts (02 cases per each district).

Animal Rabies*

One hundred and eighty nine (189) dogs were reported positive for rabies compared to 175 positives in the previous quarter and 106 positives in the same period in the last year.

Rabies Control Activities*

Dog vaccination - A total of 236571 dogs were

immunized during the 3rd quarter 2006 when compared to 208377 in the previous quarter and 190765 in the corresponding quarter of last year.

Stray dog elimination – A total of 4039 dogs were destroyed during the 3^{rd} quarter 2006 when compared to 6786 in the previous quarter and 20814 in the corresponding quarter of last year.

*Source - Director/PHVS

7. MALARIA

Distribution of malaria cases reported during the 3rd quarter by districts is shown in Table 4. During the 3^{rd} quarter of 2006, there was a significant reduction in the incidence of malaria in comparison with the same period of 2005 as seen in Table 5.

Table 4.

RESULTS OF BLOOD SMEAR EXAMINATION -3^{RD} QUARTER 2006

District	B.F.	Positives	P.v.	P.f./ Mixed
Colombo	11412	4	4	0
Gampaha	9676	21	21	0
Kalutara	2264	3	2	1
Kandy	6528	2	2	0
Matale	2393	3	2	0
Nuwara Eliya	36	0	0	0
Galle	159	0	0	0
Matara	2325	1	1	0
Hambantota	9134	2	2	0
Jaffna	17156	5	3	2
Kilinochchi	7024	0	0	0
Vavuniya	7693	27	27	0
Mannar	4395	2	2	0
Mullativu	6713	0	0	0
Batticaloa	24161	23	22	0
Ampara	5094	5	3	0
Kalmunai	9506	10	10	0
Trincomalee	8515	48	47	1
Kurunegala	27856	61	58	2
Puttalam	6709	23	21	0
Anuradhapura	31020	51	50	0
Polonnaruwa	11694	9	8	0
Badulla	5435	0	0	0
Moneragala	15128	7	7	0
Ratnapura	3825	2	2	0
Kegalla	1205	1	1	0
Total	237056	295	289	6

BF—Blood Films

P.v.— Plasmodium vivax

P.f.— Plasmodium falciparum

Table 5

RESULTS OF BLOOD SMEAR EXAMINATION FOR MALARIA PARASITES, 3RD QUARTER 2005/2006

	3 rd Quarter 2005	3 rd Quarter 2006
No. of blood smears examined	237056	255893
No. of positives	310	113
No. of <u><i>P. vivax</i></u>	295	108
No. of <u>P. falciparum</u>	9	5
No. of mixed infections	6	0
No. of infant positives	0	1
Slide positivity rate (S.P.R.)	0.13%	0.04%
P.v. : P.f. ratio	33:1	22:1
Percentage of infant positives	0%	0.12%

8. JAPANESE ENCEPHALITIS (J.E.)

During the 3rd quarter of 2006, 21 cases of Encephalitis were reported to the Epidemiological Unit.

Among the reported cases, 20 cases were investigated and 8 were clinically confirmed as JE. No deaths were reported during the quarter.

This is in comparison to 8 cases and no deaths reported during the previous quarter and 4 cases and 2 deaths in the corresponding quarter of the last year.

Table 6

DISTRIBUTION OF JAPANESE ENCEPHALITIS CASES BY DPDHS DIVISION—3RD QUARTER 2006

	No. of Cases
Colombo	1
Galle	1
Kalutara	2
Kandy	1
Kurunegala	2
Ratnapura	1
Total	8

9. ENTERIC FEVER

In the 3rd quarter of 2006, a total of 352 cases of enteric fever were notified to the Epidemiological Unit, compared to 533 cases in the previous quarter and 571 cases in the corresponding quarter of 2005.The districts of Nuwara Eliya (47), Vavuniya(33) and Kandy(29) recorded the highest number of cases (Table24).

Among the MOH areas Walapone (31) and Vavuniya (25) notified a large number of cases during the quarter under review.

10. VIRAL HEPATITIS

In the 3rd quarter of 2006, 588 cases of viral hepatitis were reported to the Epidemiological Unit, compared to 743 cases in the previous quarter (2nd quarter 2005) and 666 cases in the corresponding quarter of 2005. Among the reported cases, 107 were investigated and confirmed as viral hepatitis. DPDHS area Nuwara Eliya recorded the highest number of cases (76) accounting for 10% of the case load.

11. DYSENTERY

In the 3rd quarter of 2006, a total number of 2143 cases of dysentery were notified to the Epidemiological Unit, compared to 1551 cases in the previous quarter and 1777 cases in the corresponding quarter of the previous year.

The following MOH areas notified large number of cases.

MOH Area	No. of cases
Vakarai	108
Pelmadulla	58
Matugama	56
Ampara	54
Anamaduwa	44

12. DENGUE FEVER (D.F.) / DEN-GUE HAEMORRHAGIC FEVER (D.H.F.)

During the 3rd quarter 2006, 3104 cases of DF/ DHF and 12 deaths were reported (CFR 0.58%) compared to 2821 cases and 06 deaths (CFR 0.21%)reported during the previous quarter and 891 cases and 11 deaths (CFR 1.23%) reported during the corresponding quarter of last year.

Table 7 shows the distribution of DF/DHF cases and deaths by the DPDHS divisions during the 3^{rd} quarter 2006.

During the 3rd quarter 2006, 8 blood samples were tested using IgM capture ELISA test and Haemagglutination Inhibition test at the Department of Virology, MRI and out of those 5 samples were confirmed as positive.

Table 8.

DHF STATISTICS FROM THE DEPARTMENT OF VIROLOGY, MRI – 3RD QUARTER 2006

Month	Clinically Suspected	Serologically confirmed
July	3	2
August	3	2
September	2	1

Table 7

MORBIDITY AND MORTALITY DUE TO DF/ DHF BY DPDHS AREAS- 3RD QUARTER 2006

DPDHS Division	Cases	Deaths
Colombo	999	3
Gampaha	528	2
Kalutara	255	0
Kandy	351	0
Matale	79	0
Nuwara Eliya	13	0
Galle	35	0
Hambantota	65	0
Matara	122	0
Jaffna	6	0
Kilinochchi	0	0
Mannar	0	0
Vavuniya	2	0
Mullativu	0	0
Batticaloa	5	0
Ampara	9	0
Trincomalee	11	0
Kurunegala	188	3
Puttalam	98	1
Anuradhapura	17	1
Polonnaruwa	9	0
Badulla	58	0
Moneragala	11	0
Ratnapura	97	1
Kegalle	145	1
Kalmunai	1	0
TOTAL	3104	12

12.2. ENTOMOLOGICAL SURVEIL-LANCE OF DENGUE VECTORS

Results of the entomological surveillance carried out by the Medical Research Institute and Entomological Unit, Western Province, in selected MOH areas of Colombo, Gampaha and Kalutara districts, for the 3rd quarter 2006 are given in Table 9.

Surveillance activities were carried out in locations identified as 'high-risk' by the respective MOOH and action was taken to eliminate the breeding sites detected.

Breteau Index= <u>No. of Positive containers</u> x 100 No. of premises inspected

Table 9

AEDES LARVAL DENSITY (BRETEAU INDEX) IN COLOMBO, GAMPAHA AND KALUTARA DISTRICTS—3RD QUARTER 2005/2006

	July		Aug	August		September	
	А	В	А	В	А	В	
Nugegoda	9.5	5.0	10.0	9.3	4.8	11.2	
Maharagama	2.5	4.5	1.8	8.0	1.3	10.6	
Moratuwa	10.4	11.2	05	03	11.2	11.2	
Kaduwela	6.4	10.4	1.3	6.0	2.7	11.4	
Piliyandala	2.3	12.3	1.2	11.5	1.4	15.6	
Homagama	3.0	12.0	0.0	20.3	0.0	28.2	
Kelaniya	3.2	7.3	9.0	22.1	4.7	15.8	
Ragama	0.0	6.4	2.0	11.2	0.5	5.4	
Ja-Ela	2.5	10.5	4.8	26.5	6.6	19.5	
Wattala	1.7	3.4	1.0	10.0	8.0	15.5	
Mahara	2.0	7.0	0.8	18.5	2.5	18.5	
Dompe	0.0	9.0	2.0	27.0	2.0	22.0	
Panadura	4.0	7.0	3.0	11.0	8.6	23.6	

(A) = Aedes aegypti

(B) = Aedes albopictus

Number of premises examined per area = 300

3rd Quarter 2. District

13. LEPROSY

QUARTERLY RETURN OF LEPROSY STATISTICS -3RD QUARTER 2006

Table 10.

	At the end of the quarter			Cumulative for end of the quarter		
	3 rd Quarter 2006	3 rd Quarter 2005	Diff. (%)	2006	2005	Diff. (%)
New patients detected	495	368	34.5	1387	1355	2.3
Children	61	37	64.8	145	140	3.5
Grade 2 Deformities	18	21	-14.2	71	76	-6.5
Multi-Bacillary	205	165	24.2	596	569	4.7
Females	219	143	53.1	614	560	9.6

1. National					
District	New patients	Deformities	Child	MB	Females
Colombo	135	3	15	44	59
Gampaha	67	3	13	27	33
Kalutara	51	0	7	11	24
Western	253	6	35	82	116
Galle	12	0	2	5	7
Matara	22	0	2	8	9
Hambantota	19	0	0	15	4
Southern	53	0	4	28	20
Kandy	6	1	0	3	1
Matale	2	1	0	2	1
Nuwara Eliya	0	0	0	0	0
Central	8	2	0	5	2
Anuradhapura	14	1	1	5	10
Polonnaruwa	12	1	1	8	1
North Central	26	2	2	13	11
Kurunegala	26	0	0	13	13
Puttalam	33	1	8	20	14
North Western	59	1	8	33	27
Kegalla	10	1	0	5	3
Ratnapura	20	3	1	11	7
Sabaragamuwa	30	4	1	16	10
Badulla	3	1	0	1	1
Moneragala	6	0	0	4	1
Uva	9	1	0	5	2
Trincomalee	6	1	1	5	4
Baticaloa	26	0	1	18	14
Ampara	8	0	2	2	3
Kalmunai	12	0	5	6	8
Eastern	52	1	9	31	29
Jaffna	0	0	0	0	0
Vavuniya	3	1	1	1	1
Mannar	2	0	1	1	1
Mulativu	0	0	0	0	0
Kilinochchi	0	0	0	0	0
Northern	5	1	2	2	2
Sri Lanka	495	18	61	215	219

Source: Leprosy Campaign

14. SURVEILLANCE AT SEA PORT

Surveillance activities carried out by the Port Health Office at Colombo Sea Port during the 3rd quarter 2006 is given below.

1. Yellow Fever Vaccination

Total number vaccinated	-	54
2. Granting Pratique to Vessels		
Number issued 3. Deratting Certification	-	1102
Number issued	-	105

Vaccinations carried out by the Assistant Port Health Office, Colombo 8, during the 1st quarter 2006 is given below.

a. Yellow fever	558

b. Meningococcal meningitis 405

15. SURVEILLANCE AT AIRPORT

Surveillance activities carried out at the International Airport, Katunayake during the 1st quarter 2006 is given below.

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1. Granting Pratique to Aircrafts

ssued

2. Airport Sanitation

a.	No. of sanitary inspections carried out including food establishments	-	12
b.	No. of food samples taken under Food Act	-	0
c.	No. found defective	-	0
d.	No. of court cases/prosecuted	-	0
3.	Food Consignments		
a.	No. of food consignments inspected	-	236
b.	No. released	-	236
c.	No. rejected	-	0
4.	Release of human remains		
	No. of human remains released	-	83
	No. referred to JMO for post-mortem	-	08

15. MEDICAL RESEARCH INSTITUTE

BACTERIOLOGY REPORT— 3RD QUARTER 2006

Table 11

			July	Aug	Sep
(A)	CHOLERA				
	No. of stool spe	ecimens examined	-	-	-
	No. of Eltor cho	blera	-	-	-
	Ogawa		-	-	-
	Inaba		-	-	-
	Cholera 0139		-	-	-
(B)	SALMONELLA				
	No. of Blood sp	pecimens	21	34	28
	examined				
	S. typh		-	-	02
	S. para		-	-	-
		ecimens examined	102	175	142
	No. positive	S. typhi	-	-	-
		S. paratyphi A	-	-	-
		Others	01	02	03
(C)	SHIGELLA				
	No. of specime	ns examined	102	175	142
	No. positive	Sh. flexneri 1	01	02	-
		Sh. flexneri 2	04	06	06
		Sh. flexneri 3	-	-	-
		Sh. flexneri 4	-	-	-
		Sh. flexneri 5	-	-	-
		Sh. flexneri 6	02	-	03
		Sh. sonnei	15	24	20
		Sh. others	-	-	-
(D)	ENTEROPATH	IOGENIC E. COLI			
	No. of specime	ns examined	54	66	75
	No. positive	Group A	02	02	06
(F)	CAMPYLOBAC	CTER SPECIES	01	05	06

17. SEXUALLY TRANSMITTED DISEASES

Table 12.

NEW EPISODES OF STD/HIV/AIDS REPORTED OR TREATED AT STD CLINICS IN SRI LANKA* - $3^{\rm RD}$ QUARTER 2006

Disease		New cases or new disease episodes during the quar- ter			Total new cases or new epi- sodes for the calendar year up to end of the quarter **		
	Male	Female	Total	Male	Female	Total	
HIV positives ¹	16	14	30	54	29	83	
AIDS	4	3	7	12	5	17	
Early Syphilis ²	28	24	52	77	55	132	
Syphilis Late Syphilis ³	74	70	144	220	226	446	
Congenital Syphilis ⁴	0	2	2	4	6	10	
Gonorrhoea⁵	205	87	292	644	229	873	
Ophthalmia neonatorum6	2	5	7	10	13	23	
Non specific cervicitis/urethritis	152	245	397	406	690	1096	
Chlamydial Infection	15	13	28	21	45	66	
Genital Herpes	219	246	465	639	731	1370	
Genital Warts	143	107	250	437	276	713	
Chancroid	0	0	0	0	0	0	
Trichomoniasis	6	41	47	12	114	126	
Candidiasis	230	347	577	680	1024	1704	
Bacterial Vaginosis	0	228	228	0	647	647	
Other sexually transmitted diseases	´ 115	59	174	403	162	565	
Non-venerial ⁸	876	589	1465	2409	1560	3969	

* - Central STD clinic Colombo and peripheral STD clinics of National STD/AIDS Control Programme

- ** includes adjustments for revised diagnosis, reporting delays or any other amendments
- ¹ includes AIDS cases
- ² diagnosed within 2 years of infection and considered to be infectious
- ³ diagnosed after 2 years of infection and considered to be non-infectious
- ⁴ includes both early and late cases
- ⁵ includes presumptive gonorrhoea
- ⁶ includes both gonococcal and chlamydial conjunctivitis in neonatal period
- ⁷ includes Lympho granuloma venerium, Granuloma inguinalae, Molluscum contagiosum, Scabies, Tinea, Hepatitis B etc.
- ⁸ number of STD clinic attendees who were not having sexually transmitted diseases.

18. TUBERCULOSIS

A total of 1735 tuberculosis patients were registered for the third quarter 2006 by the National Programme for Tuberculosis Control and Chest Diseases. Of this total, 1359 suffered from pulmonary disease, while the balance, 376 patients from non-pulmonary disease. One thousand four (1004) of these patients were bacteriologically confirmed with a bacteriological confirmation rate of 73.9%. The distribution of tuberculosis patients by districts is given in Table 13.

B.C.G. vaccination

A total of 83252 B.C.G. vaccinations were carried out during the quarter with 92.13% coverage.

Table 13.

DISTRIBUTION OF TUBERCULOSIS PATIENTS BY DPDHS DIVISIONS

- 3RD QUARTER 2006

DPDHS DIVI- SION	PTB	ОТВ	Total	+ve	Pulmonary TB Direct SS +ve (%)
Colombo	116	22	138	102	87.9
Gampaha	198	45	243	164	82.8
Kalutara	131	56	187	92	70.2
Kandy	102	39	141	59	57.8
Matale	41	11	52	30	73.2
Nuwara Eliya	37	8	45	19	51.4
Galle	85	20	105	70	82.4
Hambantota	61	7	68	35	57.4
Matara	29	11	40	22	75.9
Jaffna	25	14	39	12	48.0
Vavunia	11	3	14	11	100.0
Kilinochchi	2	2	4	1	50.0
Mannar	1	0	1	1	100.0
Mullativu	2	1	3	1	50.0
Ampara	9	4	13	8	88.9
Batticaloa	27	8	35	23	85.2
Trincomalee	35	3	38	20	57.1
Kurunegala	74	20	94	65	87.8
Puttalam	22	9	31	17	77.3
Anuradhapura	46	15	61	38	82.6
Polonnaruwa	20	5	25	16	80.0
Badulla	41	9	50	26	63.4
Monaragala	25	6	31	19	76.0
Kegalle	109	29	138	74	67.9
Ratnapura	79	26	138	74	67.9
Kalmune	31	3	34	14	45.2
Total	1359	376	1735	1004	73.9

PTB-Pulmonary Tuberculosis OTB-Other Tuberculosis Data from Central TB Register

19. JAPANESE ENCEPHALITIS SUVEILLANCE REPORT - 2005

Japanese Encephalitis (JE) is an acute infection in the central nervous system caused by an arthropod - borne virus. It is the most common documented cause of viral encephalitis in Asia. Japanese Encephalitis virus was first isolated in Sri Lanka in 1968. The isolation was done at the Medical Research Institute, Colombo. Since then JE cases have been identified from various parts of the country.

There were no major outbreaks of JE since the introduction of vaccine to control the disease. In year 2005, there were 65 suspected cases of JE with 6 deaths. The case fatality rate was 9.2%. Out of 65 suspected cases 33 cases were sero-logically confirmed. There were 39 males, 23 females and in 3 cases gender was not known. Out of 6 deaths 2 were males and 4 were females.

Table 14.

DISTRIBUTION OF SUSPECTED JE CASES AND DEATHS BY DISTRICTS—2005

District	Sus- pected cases	Positives	Deaths
Colombo	13	13	0
Gampaha	3	2	0
Kalutara	2	0	0
Kandy	2	0	0
Matale	3	2	1
Galle	4	1	1
Hambantota	1	1	0
Matara	1	0	0
Jaffna	3	0	2
Vavuniya	2	0	0
Kurunegala	6	3	0
Puttalam	2	2	0
Anuradhapura	2	0	0
Monaragala	1	0	0
Ratnapura	15	8	2
Kegalle	5	1	0
Total	65	33	6

Districts of Ratnapura and Colombo have reported the highest number of cases accounting for 23% and 20% of the total case load respectively.

Table 15 Shows the distribution of JE cases by month during 2005.

Table 15

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DISTRIBUTION OF SUSPECTED JE CASES AND DEATHS BY MONTHS—2005

Month	Suspected Cases	Positives	Deaths
January	16	12	1
February	7	6	0
March	6	4	1
April	3	2	0
May	3	0	1
June	5	2	1
July	4	0	1
August	1	0	0
September	4	1	0
October	3	0	1
November	3	0	0
December	10	6	0
Total	65	33	6

Table 16

CASES, DEATHS AND CASE FATALITY RATE (CFR) OF JE, 1990 – 2005

Year		Japanese Er	ncephalitis	
	Cas	ses ¹	Deaths	CFR ³
	No.	Rate ²	Deaths	UFK
1990	387	2.3	43	11.1
1991	325	1.9	25	7.7
1992	291	1.7	27	9.3
1993	289	1.6	52	18.0
1994	230	1.3	41	17.6
1995	173	1.0	32	18.5
1996	307	1.7	44	14.4
1997	164	0.9	19	11.6
1998	122	0.7	3	2.5
1999	102	0.5	3	2.9
2000	83	0.5	2	2.4
2001	66	0.4	9	13.6
2002	113	0.6	15	13.2
2003	133	0.7	20	15.0
2004	129	0.66	9	6.9
2005	65	0.33	6	9.2

1. Based on Special surveillance

2. Incidence rate per 100,000 population

3. Case Fatality Rate (CFR) percentage

As seen in Table 16 Case fatality rate for Japanese Encephalitis has varied between 2.5% and 18.5% during the period between 1990 –2005.

Distribution of JE cases and deaths by age group is shown in Table 17.

Table 17

DISTRIBUTION OF SUSPECTED JE CASES AND DEATHS BY AGE GROUPS

Age group	Suspected Cases	Serologi- cally Posi- tives	Deaths
<1	2	1	1
1-4	9	5	1
5-9	5	1	1
10-14	6	4	0
15-19	11	3	1
20-24	2	2	0
25-29	5	4	0
30-34	9	5	0
35-39	2	2	0
40-44	2	1	1
45-49	4	3	0
50-54	2	0	1
5-59	2	0	0
>60	3	1	0
Unknown	1	1	0
Total	65	33	6

JE Immunization programme

Target population for the JE immunization Is children 1-10 years of age. First two doses of the vaccine are administered 1 to 4 weeks apart once the child completes one year. One year after the second dose third dose of the vaccine is given. A booster dose is given. four years after the third dose

JE immunization programme was conducted in 17 administrative districts and 5 high risk MOH areas in Matale district(Dambulla, Galewela, Laggala-Pallegama, Wilgamuwa and Naula). It was conducted in May- August in year 2005.

Immunization coverage for JE vaccine in the 1-3 year age group during 2005 is shown in Table 18.

Table 18

JE IMMUNIZATION COVERAGE IN 1-3 YEARS OLD CHILDREN 2005

	Immunization Coverage* (1-3 years old children)				
District	1 st dose	2 nd dose	3 rd dose		
Anuradhapura	105.51	97.21	71.80		
Polonnaruwa	99.50	96.33	67.43		
Kurunegala	89.18	86.86	67.48		
Puttalam	97.83	82.24	80.09		
Colombo	92.16	88.76	71.72		
Gampaha	96.30	88.05	81.54		
Kalutara	112.71	100.02	180.69		
Galle	101.12	101.92	100.12		
Matara	86.69	82.39	66.18		
Hambantota	85.42	87.45	82.30		
Ampara	121.63	80.29	88.18		
Kalmunai	112.15	95.43	66.60		
Trincomalee	60.21	52.25	40.08		
Batticaloa	103.28	101.48	98.03		
Jaffna	102.97	100.13	49.88		
Ratnapura	84.34	80.24	35.18		
Matale	93.52	91.49	-		
Sri Lanka	96.70	90.69	79.12		

*Coverage rate has been calculated using the number of DPT first doses given in 2004 as the denominator.

Immunization coverage for the third dose of JE vaccine is low in Ratnpura and Jaffna districts where the JE immunization programme was initiated in 2003. Immunization coverage for all three doses of the vaccine is low in Trincomalee district.

20. LEPTOSPIROSIS SURVEIL-LANCE REPORT 2005

The number leptospirosis cases notified to the Epidemiology Unit in 2005 was 1550. This is a 7% increase, when compared to the 1447 cases in 2004. Out of the notified 1550 cases, only 618 were confirmed by the MOOH.

During the last decade, there has been an increase in the number of leptospirosis cases reported in the country (Figure 1). This increase may be due to the occurrence of outbreaks of leptospirosis in some districts and also due to the improved case detection. The actual incidence of Leptospirosis is likely to be more than the hospital admission figures, as a large number of patients with mild form of the disease do not seek treatment at all or are being treated at the OPD or by private practitioners, therefore not reported to the Epidemiology Unit.

The highest number of 220 cases was reported in Gampaha district. The incidence rate for the country was 7.9/100,000, where as the highest incidence rate of 23.9/100,000 was reported from Monaragala DPDHS division (Table 19). The other DPDHS areas where high numbers of leptospirosis cases reported were; Colombo (152 cases, 6.4/100,000), Kalutara (112 cases, 10.2/100,000),Matara (156 cases. (184 19.6/100,000), Kegalle cases, 23.0/100,000) and Ratnapura (103 cases, 9.7/100.000). Zero cases were reported from Killinochchi, Mullativu, Mannar and Kalmunai. The possibility of under reporting in some DPDHS divisions cannot be ruled out.

The disease occurrence was increased during August -September in 2005 (Figure 2). However in the previous years, marked seasonality was observed and these seasonal trends are important to be highlighted, particularly in targeting preventive activities. Paddy cultivation takes place in most of the endemic areas and the peak incidence is associated with the paddy harvesting seasons. During this period, there is an increase in the rodent population in and around the fields. Majority of the patients (59%) were exposed in the paddy fields, indicating occupational exposure among the farmers. (Figure 3)

The analysis of 618 confirmed cases in 2005 of leptospirosis cases shows that the male to female sex ratio is around 9:1 as observed in the previous years. (Table 20) This further highlights the evidence of occupation related nature of the disease. As in the past years increased risk among working and physically active groups was observed. Most of the cases were in the age group of 20-44 years (60.8%). Also a substantial number was reported from the age group of 45-64 years (24.7%) too. (Table 20)

Leptospirosis is one of the notifiable diseases in Sri Lanka. The earliest available evidence of leptospirosis having been diagnosed in Sri Lanka was in 1953. Over 19 leptospiral serovars belonging to over 7 sero-groups have been isolated and incriminated as the causative agent for leptospirosis in man and/or animals in Sri lanka.. It is an endemic disease in many parts of Sri Lanka, and occurs throughout the year. There is no ongoing national prevention and control programme for leptospirosis and only ad-hoc programmes at the divisional level are carried out by some MOOH.

Sentinel site surveillance was started in 2004 in order to strengthen prevention and control strategies in the affected areas. Initially these activities were carried out in the areas where the incidence was high as models. The final objective of this was to introduce an effective and sustainable prevention and control programme for the country. Thirteen medical institutions were identified as the sentinel sites and the focal point was the Infection Control Unit / Nurses in the respective medical institutions. Regional Epidemiologists in the respective areas monitor this activity at the district level, whereas the Epidemiology Unit closely monitors the programme at the national level. The surveillance activities at these sentinel sites have improved remarkably. (Table 22 and 23)

These sentinel sites reported 873 cases of leptospirosis, i.e. 56% coverage of the total reported cases in the country. This indicates the appropriate selection of sentinel sites and their representational nature to cover the prevention and control activities. Out of 33 deaths reported from sentinel sites, 14 were from GH Matara. The case investigation rate at sentinel sites was 81%. GH Ragama, BH Panadura, GH Kegalle, BH Mawanella, and BH Karawanella had shown 100% investigation rate, indicating the good practice by the Infection Control Nurses designated for the sentinel site surveillance at these institutions.

Table 22.

SENTINEL SITE SURVEILLANCE BY REGIONAL EPIDEMIOLOGISTS 2005

Regional Epide- miologist	Total No. Reports Received (n=12)	Total No. R e p o r t s received on time	Timeli- ness%
Colombo	12	11	92%
Gampaha	12	11	92%
Kalutara	11	8	73%
Kandy	5	3	60%
Kurunegala	12	10	83%
Kegalle	11	11	100%
Galle	8	7	88%



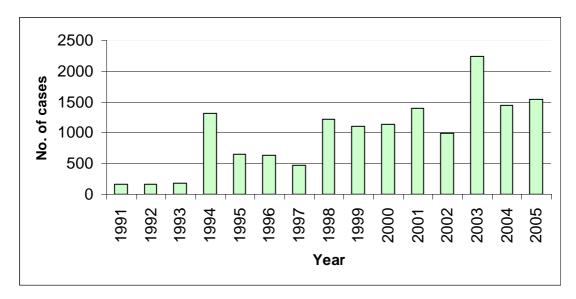


FIGURE 2: LEPTOSPIROSIS CASES BY MONTHS 2003-2005

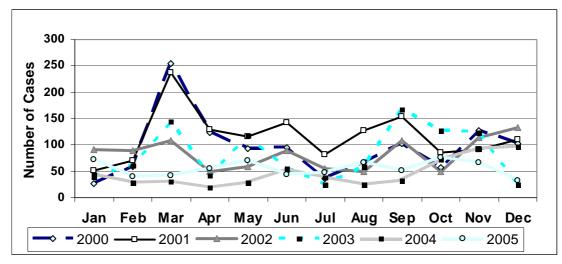


Table 19.

REPORTED AND CONFIRMED CASES OF LEPTOSPIROSIS BY DPDHS IN 2005

DPDHS Area	Number Notified	Number Con- firmed	Reporting Rate
Colombo	152	78	/100,000 6.4
Gampaha	220	115	10.4
Kaluthara	112	45	10.2
Kandy	75	35	5.6
Matale	39	17	8.4
Nuwara Eliya	13	3	1.8
Galle	84	31	8.2
Hambantota	45	38	8.3
Matara	156	21	19.6
Jaffna	1	1	0.2
Kilinochchi	0	0	0.0
Mannar	0	0	0.0
Vavuniya	3	0	2.1
Mulativu	0	0	0.0
Batticaloa	2	1	0.4
Ampara	15	4	2.5
Trincomalee	7	5	1.8
Kurunegala	38	13	2.5
Puttalama	27	15	3.7
Anuradhapura	83	21	10.6
Polonnaruwa	22	16	5.9
Badulla	70	0	8.5
Moneragala	99	27	23.9
Ratnapura	103	25	9.7
Kegalle	184	107	23.0
SRI LANKA	1150	618	7.9

Table 20.

DISTRIBUTION OF REPORTED LEPTOSPI-ROSIS CASES BY SEX IN 2005

	Number of Cases	%
Male	557	90.1
Female	61	9.9

Table 21.

DISTRIBUTION OF LEPTOSPIROSIS CASES BY AGE GROUP IN 2005

Age Group (Years)	Number of Cases	%
Below 1	1	0.2
1 – 14	20	3.2
15 – 19	54	8.7
20 – 44	375	60.8
45 – 64	153	24.7
65 or above	15	2.4

Figure 3

DISTRIBUTION OF LEPTOSPIROSIS CASES BY PLACE OF EXPOSURE

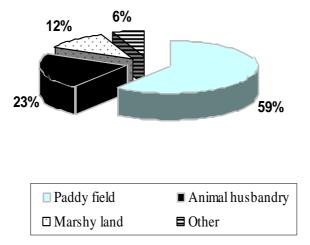


Table 23.

LEPTOSPIROSIS SENTINEL SITE SURVEILLANCE 2005

Sentinel site	Total Number of Reports Received (%) N=26	Total number of Nil Reports (%)	Number of cases re- ported	Number of cases investigated (Investigation rate %)	Number of deaths reported
BH Avissawella	21 (81%)	4(19%)	51	19 (37%)	0
BH Homagama	25 (96%)	7 (28%)	80	70 (88%)	1
GH Ragama	23 (88%)	1 (4%)	156	156 (100%)	4
BH Watupitiwala	25 (96%)	11 (44%)	27	16 (59%)	1
BH Horana	26 (100%)	6 (23%)	57	40 (70%)	4
BH Panadura	26 (100%)	17 (65%)	14	14 (100%)	1
GH Kandy	3 (12%)	0 (0%)	6	3 (50%)	0
TH Karapitiya	24 (92%)	5 (21%)	90	33 (37%)	6
GH Matara	25 (96%)	2 (8%)	189	179 (95%)	14
GH Kurunegala	24 (92%)	17 (71%)	33	10 (30%)	1
GH Kegalle	25 (96%)	2 (8%)	152	152 (100%)	1
BH Karawanella	23 (88%)	18 (78%)	7	7 (100%)	0
BH Mawanella	25 (96%	18 (72%)	11	11 (100%)	0
Total	295 (87%)	108 (37%)	873	710 (81%)	33

21. SURVEILLANCE REPORT ON ADVERSE EVENTS FOLLOW-ING IMMUNIZATION IN 2005

Surveillance of adverse events following immunization (AEFI) has been gradually improving since its commencement in 1996. In the initial years the focus was on the establishment of the surveillance system of AEFI. However, in the last few years the main concern was on improvement of the quality of AEFI surveillance. According to the available information, majority of AEFI were due to the programme errors, which are preventable. Programme errors may be the resulted of errors or mishaps occurring at any point, up to the administration of vaccine to the recipient. Therefore, a strong surveillance system is vital for minimizing possible errors and improving the immunization service and assure vaccine safety.

Table 24.

DISTRIBUTION OF AEFI BY DPDHS DIVI-SION 2005

DPDHS Division	No: of AEFI	Rate*
Colombo	251	39.71
Gampaha	483	77.96
Kalutara	271	75.96
Kandy	214	48.37
Matale	148	95.72
Nuwara Eliya	69	28.35
Galle	53	16.81
Hambantota	161	85.25
Matara	141	56.32
Jaffna	26	14.82
Kilinochchi	3	0.55
Mannar	4	13.75
Vavuniya	3	5.36
Mullativu	0	0.00
Batticaloa	12	6.24
Ampara	31	36.24
Trincomalee	24	16.52
Kurunegala	206	42.01
Puttalam	135	51.72
Anuradhapura	170	59.01
Polonnaruwa	148	117.22
Badulla	22	8.05
Moneragala	53	37.17
Ratnapura	371	114.36
Kegalle	158	60.79
Kalmunai	6	4.54

(* Rate per 100,000 doses)

Table 25.

DISTRIBUTION OF ABSCESS FORMATION BY DPDHS DIVISION 2003 - 2005

	No.& Rate*		No.& Rate*		No.& Rate*	
	20	03	2004		2	005
Colombo	49	7	44	8.05	38	8.23
Gampaha	34	4.7	51	7.86	46	10.19
Kalutara	38	9.8	46	16.86	42	9.31
Kandy	88	31.87	57	17.23	41	12.51
Matale	38	28.87	24	20.00	17	14.97
Nuwara Eliya	12	6.29	29	14.94	20	11.29
Galle	36	8.96	20	8.59	6	2.61
Hambantota	30	13.02	70	47.67	38	27.56
Matara	22	7.5	7	3.81	41	22.27
Jaffna	14	9.12	3	2.19	2	1.56
Kilinochchi	1	1.35	2	5.78	2	4.85
Mannar	0	0	0	0.00	4	18.94
Vavuniya	0	0	0	0.00	2	4.81
Mullativu	0	0	0	0.00	0	0.00
Batticaloa	6	3.57	28	19.38	12	8.56
Ampara	4	4.22	2	2.93	3	4.82
Trincomalee	6	3.95	14	13.81	4	3.82
Kurunegala	46	9.75	27	7.23	36	9.93
Puttalam	8	2.66	11	5.41	13	6.80
Anuradhapura	26	8.93	20	9.41	41	19.33
Polonnaruwa	31	24.34	15	16.39	25	27.09
Badulla	11	4.77	19	8.92	14	6.99
Moneragala	13	30.37	4	3.64	28	27.18
Ratnapura	30	14.95	84	34.69	51	21.58
Kegalle	19	9.22	24	11.99	34	18.04
Kalmunai	2	1.27	0	0.00	5	5.27
Sri Lanka	564	10.18	620	12.95	565	11.82

*(Rate per100,000 doses)

High numbers of AEFI have been reported from DPDHS Gampaha, Ratnapura and Colombo. However the rates were higher in Polonnaruwa (117/100,000), Ratnapura (114/ 100,000) and Matale (96/100,000).

In 2005, the highest rate of AEFI was reported in Hambantota (28/100,000) followed by Polonnaruwa (27/100,000) and Monaragala (27/100,000). In 2003 and 2004 DPDHS areas Mannar, Vavunia and Mullativu had not reported any abscess. In Sri Lanka abscess formation following immunization is around 10 -12/100,000 of immunizations performed.

Higher percentages of reported AEFI are due to

Table 26.

DISTRIBUTION OF REPORTED AEFI BY TYPE OF ADVERSE EVENTS 2003 - 2005

Type of AEFI reported	Number 20		Number reported 2004			
	No	%	Ν	%	Ν	%
Injection site abscess	564	23.2	620	21.92	565	17.90
Lymphadenitis	17	0.7	62	2.19	77	2.44
Severe Local Reaction	324	13.3	407	14.39	485	15.36
High Fever	319	13.1	441	15.59	554	17.55
Allergic Reaction	665	27.4	728	25.73	869	27.53
Nodule	66	2.7	71	2.51	106	3.36
Seizures	66	2.7	140	4.95	156	4.94
Arthralgia	15	0.6	12	0.42	5	0.16
Shock	46	1.98	09	0.32	2	0.06
Scream	39	1.6	73	2.58	52	1.65
Encephalopathy	01	0.04	05	0.18	1	0.03
Meningitis	-	-	03	0.11	2	0.06
GBS	-	-	6	0.21	0	0.00
Nephrotic Syndrome	-	-	-	-	1	0.03
Death	-	-	-	-	4	0.12
Others	305	12.66	229	7.85	283	8.96
Total	2426	100	2836	100.00	3159	100.00*

Table 27.

AEFI REPORTED BY TYPE OF ANTIGEN 2003 - 2005 SRI LANKA

Vaccine	2003		2004	1	2005		
	No: of AEFIs Reported	Rate*	No: of AEFIs Reported	Rate*	No: of AEFIs Reported	Rate*	
BCG	25	7.44	62	24.50	113	32.83	
DPT	1353	101.94	1736	164.49	1743	126.35	
DT	37	12.82	75	21.58	101	31.11	
OPV	8	0.49	18	5.84	3	0.17	
Measles	663	32.86	61	18.62	67	18.96	
TT	19	4.02	23	7.83	44	13.26	
JE	219	30.84	414	57.62	898	192.56	
Rubella	34	14.25	56	16.02	42	17.20	
ATd	10	4.56	16	5.76	33	12.57	
MR	24	8.16	347	105.79	84	25.35	
Нер В	31	7.65	30	11.57	32	3.30	
Other	3		4		3		
Total	2424	30.50	2842	51.58	3163	46.69	

Table 28.

DISTRIBUTION OF SELECTED

programme errors and allergies. Severe neurological illnesses such as encephalopathy, meningitis and seizures were also reported.

Nephrotic Syndrome has been reported as an AEFI for the first time and Kidney biopsy confirmed as either cast nephropathy or Measangioproliferative glomerular nephritis. Thus, it was confirmed as a coincidental type AEFI.

Four deaths due to AEFI were reported in 2005. Investigation of these deaths revealed that two deaths could be categorized into coincidental type of AEFI, while the other two were due to either programme errors or coincidence or both. One death of coincidence was following rubella vaccine and serologically confirmed my-coplasma pneumonia and the cause of death was mycoplasma myocarditis. The other AEFI coincidence death was following second dose of DTP, Hep B and OPV and postmortem confirmed congenital heart disorder. The two deaths of possible coincidence or programme error were followed by measles vaccination and diagnosis were haemolitic Uraemic Syndrome and Septecaemia respectively.

In 2005, the highest rate of AEFI was due to JE (193/100,000) and DPT (126/100,000). However DTP remains the highest number of AEFI from 2003 to 2005. Minimum rate of AEFI was due to OPV.

Allergic reactions (869) were the commonest type of AEFI reported followed by abscess (565), high fever (554) and severe local reactions (485). A considerable number of seizures (156) was also reported. Out of total 2725 AEFI reported, 1447 were followed by DPT immunization.

Main observations:

- Higher percentages of AEFI reported were allergies and due to programme errors. Majority of AEFI were due to DPT (126/100,000) and abscess was the commonest AEFI whereas JE (193/100,000) caused more allergies. OPV caused a very minimal number of AEFI.
- Four deaths were reported in 2005. Investigation of these deaths revealed that the two deaths could be categorized into coincidental type of AEFI, while the other two were due to either programme errors or coincidence or both.
- The number of expected AEFI monthly reports received was more than 80% and half of them were nil reports. It could be due to the actual reduction of AEFI. However, most probably the reason may have been the lack of reporting of AEFI cases. Increased rates of AEFI detected in some DPDHS divisions may be due to the improvement of detection of AEFI.

ADVER	SE EVE	ENTS I	by an	ITIGEI	N IN 20	005		
		s			hy			

3rd Quarter

Vaccine	Seizure	Allergic Reaction:	Abscess	Severe local reactions	High fever	Lymphadenitis	Encephalitis	Paralysis	Encephalopathy	Meningitis	Shock	Arthralgia	Nephrotic syndrome	Death	Total
BCG	0	1	23	8	1	77	0	0	0	0	0	0	0	0	110
DPT	92	172	496	349	333	0	1	0	2	1	0	0	0	1	1447
OPV	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3
Measles	4	29	2	3	18	0	0	0	1	1	0	0	0	2	60
DT	1	17	17	42	6	0	0	0	0	0	0	0	0	0	83
TT	0	16	3	17	1	0	0	0	0	0	0	0	0	0	37
Rubella	0	35	0	3	1	0	0	0	0	0	0	1	1	1	42
JE	57	539	10	48	183	0	0	0	0	0	1	3	0	0	841
ATd	0	6	1	3	1	0	0	0	0	0	0	1	0	0	12
MR	0	47	1	7	6	0	0	0	0	0	1	0	0	0	62
Нер	1	7	10	4	3	0	0	0	0	0	0	0	0	0	25
Others	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Total	156	869	565	485	554	77	1	1	3	2	2	5	1	4	2725

3rd Quarter

Table 29

Acute Flaccid Paralysis (AFP) Food Poisoning Dengue Haemorrhagic Fever Simple Contd. Fever **Health Region** Human Rabies Leptospirosis Viral Hepatitis Enteric Fever **Fyphus Fever** Encephalitis Dysentery Cholera Tetanus Measles Colombo Gampaha Kalutara Kandy Matale Nuwara Eliya Galle Hambantota Matara Jaffna Kilinochchi Mannar Vavuniya Mullativu Batticaloa Ampara Trincomalee Kurunegala Puttalam Anuradhapura Polonnaruwa Badulla Moneragala Ratnapura Kegalle Kalmunai 27 2143 TOTAL

22. SUMMARY OF NOTIFIABLE DISEASES –3RD QUARTER (JULY— AUGUST) 2006

No polio cases. (from AFP surveillance system).

The Bulletin is compiled and distributed by the:

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Figures given may be subject to revision.

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

Such reports should be addressed to:

The Editor

Quarterly Epidemiological Bulletin

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