



WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health & Mass Media

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Investigation of Leptospirosis Outbreak in Jaffna District - II

This is the second article of two in a series on "Investigation of Leptospirosis Outbreak in Jaffna District"

Mortality and Clinical Manifestations

The outbreak resulted in seven fatalities, all of whom experienced a rapid progression to respiratory failure, leading to death within 24 hours of hospital admission. The deceased included one female and six males, ranging in age from 20 to 62 years. Laboratory tests confirmed leptospirosis in three cases, while autopsy findings identified pulmonary pneumonia and leptospirosis-related pulmonary hemorrhage as the primary causes of death. These observations align with a study conducted in southern Sri Lanka (Herath et al., 2019), which reported similar outcomes, with four patients presenting late (after a delay of 4–5 days) and succumbing within 24 hours of admission.

Public Health Response

In response to the outbreak, a national-level intervention was promptly initiated, with the establishment of an Incident Management Support Cell at the central and regional levels. Regular media updates were provided by the Epidemiology Unit. Daily online debriefing sessions were held with the participation of national, provincial and district health authorities. Teams from the central Epidemiology Unit provided on-site technical assistance, including a symposium on leptospirosis for clinicians and public health staff in the Jaffna District.

The Divisional Health Authorities, guided by the Provincial Director of Health Services

(PDHS) and Regional Director of Health Services (RDHS), conducted house-to-house visits in targeted areas to identify individuals exhibiting symptoms of leptospirosis. Those identified were promptly referred to local hospitals for timely diagnosis and treatment, ensuring effective management of the disease and minimizing its spread. To prevent further transmission, doxycycline chemoprophylaxis was administered to 14,478 individuals in at-risk communities. Healthcare providers were equipped with updated case definitions for timely diagnosis and referral, and hospitals adhered to national guidelines for the management of leptospirosis to ensure optimal care. Additionally, a multisectoral approach was implemented to address the environmental and animal-related factors contributing to the outbreak, underscoring the importance of coordinated efforts in managing zoonotic diseases.

The number of suspected leptospirosis cases decreased to non-endemic levels in the second week of January 2025 within the district. However, due to the ongoing presence of *Leptospira* spp. in the area and the favourable environmental conditions, it remains important to maintain a high index of suspicion for leptospirosis, particularly among patients with compatible symptoms and potential exposure to untreated water, especially during the rainy season. Raising public awareness about preventive measures and educating healthcare professionals on the clinical presentation of the disease could help reduce the prevalence of severe cases by facilitating early detection and timely treatment.

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Way Forward

The outbreak in Jaffna highlights the urgent need to revise the standard surveillance case definition to account for the atypical clinical presentation of leptospirosis, which included prominent respiratory symptoms and rapid deterioration. The development of new guidelines for managing outbreak situations is recommended to ensure timely diagnosis, appropriate clinical management, and effective public health interventions. This event also underscores the importance of multisectoral collaboration, involving healthcare, environmental, and agricultural sectors, to address the root causes of disease transmission. Strengthening surveillance systems, improving water and sanitation infrastructure, and enhancing public awareness through health education campaigns are critical measures to prevent future outbreaks.

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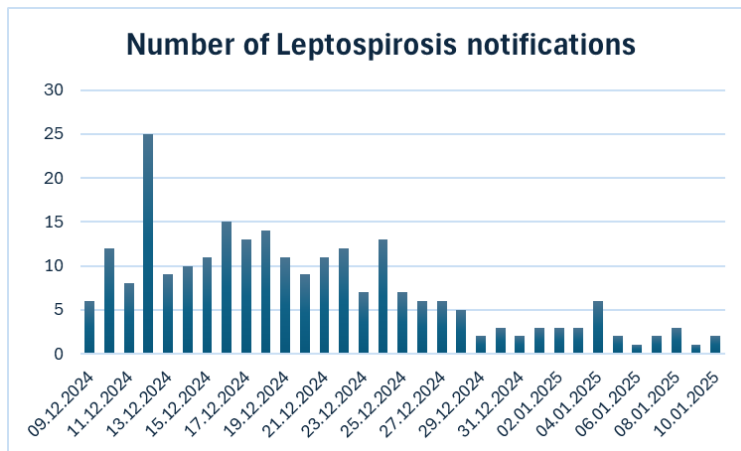


Figure 1: Number of Leptospirosis Notifications Reported to the Epidemiology Unit

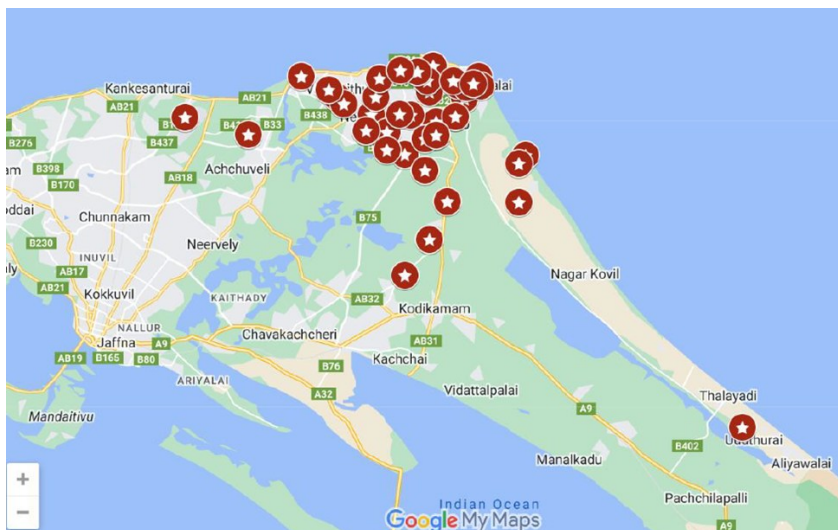


Figure 2: Google Map Depicting Clusters of Leptospirosis Cases

Table 1: Selected notifiable diseases reported by Medical Officers of Health 04th - 10th Jan 2025 (2nd Week)

RDHS	Dengue Fever		Dysentery		Encephalitis		En. Fever		F. Poisoning		Leptospirosis		Typhus F.		Viral Hep.		H. Rabies		Chickenpox		Meningitis		Leishmania-		Tuberculosis		WRCD		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**	
Colombo	245	445	1	2	0	0	0	0	0	0	4	18	1	1	0	0	0	0	0	7	17	0	1	0	0	46	81	78	100
Gampaha	191	377	0	0	1	2	0	0	0	0	10	34	0	1	0	0	0	0	9	21	1	6	3	3	21	48	73	100	
Kalutara	24	89	1	3	0	0	0	0	1	1	15	45	0	0	0	0	0	0	19	26	0	1	0	0	34	37	60	75	
Kandy	65	131	4	6	0	0	0	0	1	9	26	2	5	0	0	0	0	0	7	14	0	1	1	1	7	64	100	100	
Matale	39	91	0	0	0	0	0	0	0	2	14	0	0	2	2	0	0	0	3	4	0	0	4	14	3	3	100	100	
Nuwara Eliya	8	13	0	2	0	0	2	0	4	6	11	2	5	0	0	0	0	0	1	1	0	1	0	0	8	18	92	100	
Galle	82	112	0	5	0	2	0	0	8	17	43	2	4	0	0	0	0	0	22	25	6	7	0	0	14	32	85	100	
Hambantota	35	71	2	2	0	1	0	0	0	7	17	0	2	0	0	0	0	0	5	11	0	0	1	7	5	11	100	100	
Matara	23	51	0	0	0	1	0	0	0	11	28	0	0	0	1	0	0	0	12	20	0	2	4	6	4	15	88	100	
Jaffna	52	110	3	8	0	0	1	1	0	24	50	16	44	0	0	0	0	0	4	8	1	2	0	0	9	9	93	93	
Kilinochchi	8	13	2	2	0	0	1	1	0	1	11	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	100	100
Mannar	15	26	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	100	100
Vavuniya	2	6	0	0	0	0	0	0	0	7	11	1	1	0	0	0	0	0	1	1	0	1	1	1	0	0	1	100	100
Mullaitivu	1	4	0	1	0	0	1	1	0	9	15	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	83	100	
Batticaloa	55	117	5	9	0	1	0	0	1	6	8	0	1	2	5	0	0	0	4	15	1	2	1	1	5	6	79	100	
Ampara	6	10	0	0	0	1	0	0	0	5	9	0	0	0	0	0	0	0	2	3	0	2	1	1	2	3	57	100	
Trincomalee	34	62	0	4	0	1	0	0	2	6	7	0	1	0	0	0	0	0	6	8	0	1	2	2	1	5	100	100	
Kurunegala	39	65	1	2	0	2	0	0	15	31	63	0	0	0	0	0	0	0	14	28	10	12	8	23	8	15	97	100	
Puttalam	45	75	0	0	0	0	0	0	0	18	44	1	5	0	1	0	0	0	7	14	1	8	0	0	0	0	13	69	100
Anuradhapura	20	47	0	1	0	2	0	0	0	16	46	0	1	1	2	0	0	0	6	14	0	2	28	54	4	6	74	100	
Polonnaruwa	6	11	0	2	0	0	0	0	1	3	13	0	0	2	2	0	0	0	6	11	0	0	6	17	3	3	100	100	
Badulla	17	42	0	1	0	0	0	0	0	10	19	0	3	2	4	0	0	0	12	24	1	3	0	1	4	8	81	100	
Monaragala	26	56	0	0	0	1	0	0	0	12	34	3	3	0	0	0	0	0	1	1	4	6	4	7	3	6	91	100	
Ratnapura	56	120	2	7	0	1	0	0	2	42	82	0	1	0	0	0	0	0	8	12	3	4	2	3	6	14	95	100	
Kegalle	40	94	1	7	1	2	0	0	1	3	22	40	1	0	0	0	0	0	13	34	0	0	2	3	8	20	91	100	
Kalmunai	14	28	0	1	0	0	0	0	1	1	4	0	0	0	0	0	0	0	3	7	1	1	0	0	2	9	92	100	
SRI LANKA	114	2266	22	65	2	17	3	5	27	40	296	694	29	82	9	17	0	0	174	321	30	65	68	144	198	433	88	99	

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 10th Jan, 2025 Total number of reporting units 358 Number of reporting units data provided for the current week: 358 C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

04th – 10th Jan 2025(02nd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2025	Number of cases during same week in 2024	Total number of cases to date in 2025	Total number of cases to date in 2024	Difference between the number of cases to date in 2025& 2024
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	02	03	-33.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	01	02	00	00	01	00	00	01	06	02	11	07	57.14 %
Measles	01	00	00	00	00	00	00	00	00	01	22	04	25	-84 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	02	01	100%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	01	01	02	00	00	0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
CRS** =Congenital Rubella Syndrome
NA = Not Available

Take prophylaxis medications for leptospirosis during the paddy cultivation and harvesting seasons.

It is provided free by the MOH office / Public Health Inspectors.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@slt.net.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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