



WEEKLY EPIDEMIOLOGICAL REPORT

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Chikungunya: Disease Profile and Epidemiological Overview – Sri Lanka, 2025

Part I

This is the first article of two in a series on “Chikungunya: Disease Profile and Epidemiological Overview – Sri Lanka, 2025”

Chikungunya is a re-emerging vector-borne viral disease that continues to challenge public health systems in tropical regions, including Sri Lanka. The infection, caused by the Chikungunya virus, is a single-stranded RNA virus that belongs to the family *Togaviridae*, genus *Alpha-virus*.

Chikungunya virus is transmitted to humans via the bite of an infected mosquito of the *Aedes* spp., predominantly *Aedes aegypti* and *Aedes albopictus*. Mosquitoes become infected when they feed on viremic humans or non-human primates, both of which are likely the main amplifying reservoirs of the virus. Humans are typically viremic shortly before and in the first 6 days of illness. While chikungunya is rarely fatal, studies have shown that 5% to 80% of patients with persistent joint pains and prolonged fatigue for months or years after illness.

In mosquitoes, the extrinsic incubation period, the time from ingestion of the virus to the ability to transmit it, averages 7 days, ranging from 2 to 9 days. The average lifespan of *Aedes* mosquitoes, the primary vectors of chikungunya, is approximately 30 days.

Geographic expansion and regional impact of Chikungunya

Chikungunya virus (CHIKV) occurs predominantly in tropical and subtropical regions and often causes large outbreaks with high attack rates, sometimes affecting up to 75% of the population in areas where the virus is actively circulating. First identified in Tanzania in 1952, CHIKV caused sporadic outbreaks in Africa and Asia until the first recorded urban transmis-

sion in Thailand in 1958 and later in India in the 1970s.

A turning point occurred in 2004 with a major outbreak in Kenya that rapidly spread to the Indian Ocean Islands, including the Comoros, Mauritius, Réunion, and Seychelles. This marked the beginning of a period of accelerated geographic expansion. In 2013, CHIKV was detected in the Caribbean for the first time and subsequently spread across the Americas, infecting immunologically naïve populations. More recently, significant outbreaks have been reported in countries such as Brazil, Bolivia, Peru, Paraguay, Sudan, the Democratic Republic of the Congo, Bangladesh, India, Myanmar, Indonesia, Thailand, and Sri Lanka. As of December 2024, autochthonous mosquito-borne CHIKV transmission has been documented in 119 countries and territories across all six WHO regions, including Africa, the Americas, Asia, Europe, and islands in the Indian and Pacific Oceans. While transmission may decline in smaller islands after large outbreaks due to population-wide immunity, it often persists in larger populations where enough susceptible individuals remain to sustain transmission.

Chikungunya virus has a high potential for widespread outbreaks, particularly in immunologically naïve populations where the virus has not circulated previously. The key drivers of chikungunya virus transmission can be categorized into three domains: vector, virus, and human host. Vector-related factors include an increase in mosquito populations due to climatic changes, proliferation of breeding sites such as water containers, and rising insecticide resistance. Additionally, increased biting behavior resulting from environmental adaptation, and the introduction of vectors into new areas through goods transportation (e.g., mosquito

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eggs or larvae in tires) contribute to transmission. Virus-related drivers are primarily linked to genotype, including vector compatibility and enhanced transmissibility. Human host-related factors include population immunity influenced by prior virus circulation and socioeconomic conditions such as poverty. Moreover, human movement and travel facilitate the spread of the virus, while the effectiveness of mosquito bite prevention measures significantly impacts transmission risk. Together, these interconnected factors shape the dynamics and degree of chikungunya outbreaks.

Epidemiological trends and affected population in Sri Lanka

In Sri Lanka, the first Chikungunya epidemic was reported in the early 1960s, followed by decades of quiescence. In 2006 Sri Lanka experienced a significant resurgence of Chikungunya after several decades of epidemiological silence. Since then, intermittent cases and outbreaks have been reported, particularly in areas with high vector density. Between 2006 and 2007, an estimated 40,000 individuals were affected, with a similar number of cases recorded in 2008. As vector-borne diseases are climate-sensitive and often seasonal, early recognition and accurate diagnosis are vital for outbreak control and optimal patient management.

A total of 173 Chikungunya cases were reported from sentinel sites in Colombo, Gampaha and Kandy healthcare institutions (22 cases in November and December 2024, and 151 cases during 2025 as of the second week of March). The highest case burden was observed in the 41–60 age group (40.5%) with a female predominance (60.2%).

The map (Figure 1) illustrates the distribution of Chikungunya cases in Sri Lanka, categorized by patient residence and grouped by district, with shading indicating the burden of reported cases.

Chikungunya typically has high population attack rates, which can lead to the interruption of transmission in smaller island communities once a large portion of the population becomes infected and develops immunity. In contrast, in larger populations, transmission may persist over time due to the continuous presence of a substantial number of individuals who remain susceptible, allowing the virus to spread further.

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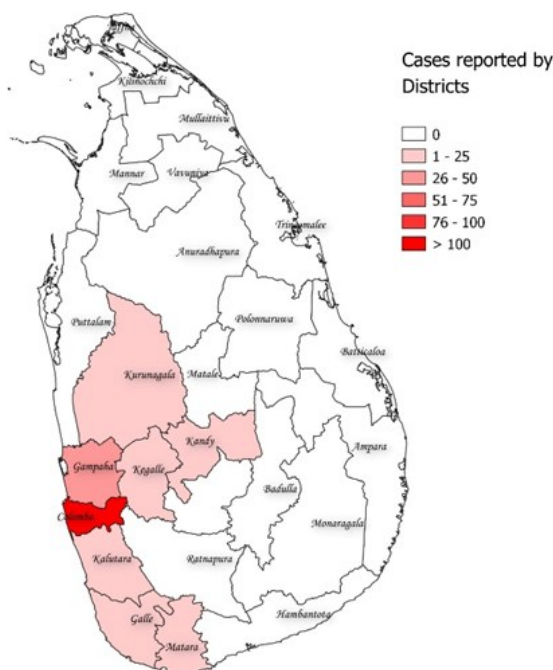


Figure 1: Geographic Distribution of Reported Chikungunya Cases by District, Sri Lanka (Based on Patient Residence)

Table 1: Selected notifiable diseases reported by Medical Officers of Health 01st–07th Mar 2025 (10th 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	262	2393	6	10	0	3	2	2	2	0	5	17	106	0	3	1	4	0	0	17	121	3	16	0	1	45	396	100	100	
Gampaha	142	1563	3	14	0	12	0	1	3	42	12	165	0	2	1	5	0	0	19	182	0	28	1	9	0	196	100	100	100	
Kalutara	43	385	1	9	0	1	0	2	0	12	15	151	0	0	0	2	0	0	30	143	0	9	0	0	15	136	75	75	75	
Kandy	49	657	3	18	0	2	1	2	0	6	10	78	0	18	0	5	0	0	5	87	1	7	6	17	5	161	100	100	100	
Matale	39	385	1	8	0	1	0	0	1	6	2	45	0	1	0	4	0	0	10	26	0	1	10	47	3	29	100	100	100	
Nuwara Eliya	2	49	1	22	0	3	1	4	0	44	2	34	3	18	0	0	0	0	5	54	0	6	0	0	7	65	100	100	100	
Galle	40	470	1	17	0	2	0	0	6	23	31	192	0	24	0	4	0	0	10	164	7	38	1	1	8	101	100	100	100	
Hambantota	17	216	1	6	0	2	0	0	0	3	10	93	0	11	0	1	0	0	20	102	0	2	7	64	2	38	100	100	100	
Matara	50	370	0	4	0	2	1	1	0	3	12	119	0	6	0	2	0	0	14	82	0	13	2	23	2	42	100	100	100	
Jaffna	15	394	0	18	0	1	0	3	0	10	0	105	12	198	0	0	0	1	17	69	2	9	0	0	1	36	100	93	93	
Kilinochchi	3	33	0	4	0	0	1	3	0	1	6	36	2	10	0	1	0	0	0	1	0	0	0	0	0	0	7	100	100	100
Mannar	0	73	0	0	0	0	0	0	0	0	1	9	0	3	0	0	0	0	3	7	0	7	0	0	4	11	100	100	100	
Vavuniya	0	22	0	4	0	0	0	0	19	20	1	28	0	2	0	0	0	0	0	6	0	5	0	5	0	6	100	100	100	100
Mullaitivu	1	21	0	1	0	0	0	1	0	0	1	32	1	3	0	0	0	0	0	6	2	4	0	0	0	0	5	100	100	100
Batticaloa	56	633	5	57	2	8	0	0	0	5	3	22	0	1	0	7	0	0	7	67	2	14	0	1	3	31	14	100	100	
Ampara	0	42	0	5	0	1	0	0	1	2	2	41	0	1	0	1	0	0	7	30	0	2	0	6	2	14	86	100	100	100
Trincomalee	17	274	0	18	0	1	0	0	2	16	2	46	0	5	0	1	0	0	2	30	0	7	0	3	0	19	0	100	100	100
Kurunegala	17	261	0	6	0	4	0	1	1	19	10	203	1	15	0	1	0	0	18	188	5	35	7	117	2	76	100	100	100	100
Puttalam	24	234	3	7	0	0	0	0	0	4	4	98	2	15	0	1	0	0	4	42	3	26	0	5	4	48	100	100	100	100
Anuradhapura	25	229	4	13	0	5	0	1	0	7	6	144	0	9	0	4	0	0	9	70	5	26	8	172	8	61	83	100	100	100
Polonnaruwa	18	130	1	7	0	0	0	0	1	7	6	35	0	0	0	1	0	0	4	45	2	6	0	0	0	11	100	100	100	100
Badulla	3	59	0	7	1	2	1	1	0	1	2	55	0	0	1	8	0	0	4	42	1	2	14	89	7	51	100	92	92	
Monaragala	17	195	0	3	0	1	2	2	0	0	3	80	0	8	0	9	0	0	14	104	3	22	1	4	3	26	91	100	100	100
Ratnapura	13	190	0	5	1	3	0	0	0	3	6	132	1	18	2	4	0	0	9	34	1	16	6	30	12	92	100	100	100	
Kegalle	43	522	2	24	0	3	0	3	1	12	25	353	1	10	0	2	0	0	10	103	3	34	5	37	4	56	100	100	100	
Kalmunai	16	296	1	20	0	3	0	0	0	12	13	159	0	4	1	6	0	0	24	192	1	14	0	11	4	27	8	100	100	
SRILANKA	912	10096	33	307	4	60	9	27	35	263	202	2561	23	385	6	73	0	1	262	1997	41	349	68	642	141	1741	87	87	99	

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 07th Mar, 2025 Total number of reporting units 361 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

01st – 07th Mar 2025 (10th 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	01	01	00	13	14	-7.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	00	00	00	02	01	01	00	05	08	48	61	-21.3 %
Measles	00	00	00	00	00	00	00	00	00	00	06	01	147	-99.3%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	01	-100%
CRS**	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Tetanus	00	00	00	00	00	01	00	00	00	01	00	02	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	00	00	00	04	01	300 %
Whooping Cough	00	00	01	00	00	00	01	00	00	02	00	08	01	700 %

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@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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