



WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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Defeating Malaria's Comeback: Sri Lanka's Fight against Imported Cases

Malaria remains a major public health issue in many countries, with an estimated 229 million cases reported in 87 countries in 2019. Despite the development of effective treatments and preventive measures, malaria continues to cause a significant burden of morbidity and mortality worldwide, particularly in tropical regions. In the past, Sri Lanka was no exception to this trend, experiencing a major outbreak of malaria in 1967, with cases exceeding 500,000, after achieving near-zero cases in 1963. However, since then, Sri Lanka has made significant strides in eliminating malaria, with the last locally transmitted case reported in 2012 and the last malaria-related death reported in 2007. In recognition of this achievement, the World Health Organization certified Sri Lanka as malaria-free in 2016, a significant milestone in the fight against malaria.

the dry zones and intermediate zones of the country and prefers to breed in freshwater pools and slow-moving streams. Additionally, several secondary vectors of malaria transmission exist in Sri Lanka, including *An. subpictus*, *An. annularis*, *An. vagus*, *An. tessellatus*, and *An. varuna*, mainly found in rural areas, with their distribution varying across the country. The identification of *Anopheles stephensi*, an invasive potential vector, on the island of Mannar during a routine entomological survey in 2016, and subsequently in four districts of the Northern and Eastern Provinces, is a concern, as this species is a significant vector of malaria in many parts of the world, including the Middle East, South Asia, and East Africa. Therefore, the continued presence of all primary, secondary, and potential vectors throughout the country underscores the importance of ongoing surveillance and management of imported cases to prevent the re-establishment of malaria in the country.

Imported cases of malaria occur when individuals contract the disease while travelling to malaria-endemic countries and subsequently bring it back to Sri Lanka. These cases pose a significant threat to the country's malaria-free status, and it is crucial to make efforts to prevent their spread to maintain the progress made in malaria elimination.

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The Anti-Malaria Campaign (AMC) is a specialized campaign within the Ministry of Health under the purview of Public Health that serves as the focal point for all activities related to malaria. The AMC directorate oversees 26 regional malaria offices, responsible for carrying out the district-level implementation of malaria control programs under the direction of the Director, of the Anti-Malaria Campaign. Regional Medical/Malaria Officers (RMOs) and their teams play a vital role in the PoR phase of malaria.

Despite the Anti-malaria campaign's efforts, imported cases of malaria continue to be a significant challenge for Sri Lanka. In 2018, the first introduced case was reported, followed by an induced case in 2021. In 2022, a total of 37 imported cases of malaria were reported, with most cases originating from India and African countries. As of 2023, nine imported cases have been reported to date.

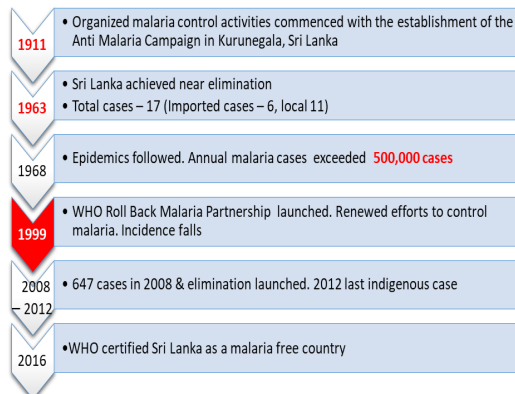


Figure 1 - History of organized malaria control and elimination

Sri Lanka is currently in the Prevention of Re-establishment phase (PoR), with the goal of maintaining the country's malaria-free status by preventing the occurrence of introduced cases and any subsequent indigenous cases. However, the continued presence of the malaria vector in Sri Lanka, coupled with global travel and trade, puts the country at high risk of malaria re-establishment during this phase.

Anopheles culicifacies is the primary vector responsible for malaria transmission in Sri Lanka. This species is widespread throughout

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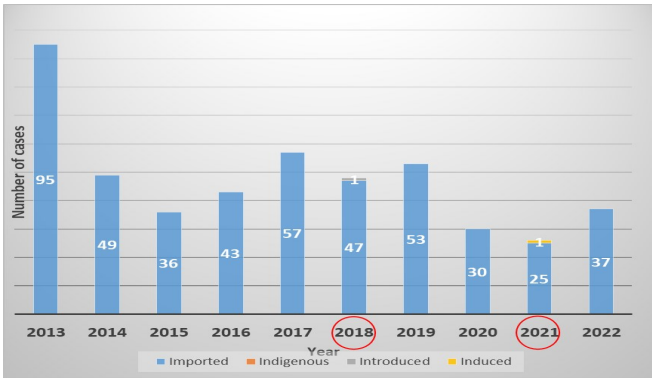


Figure 2 – Malaria case distribution since elimination (2013-2022)

Imported case - Malaria case or infection in which the infection was acquired outside the area in which it is diagnosed

Indigenous case - A case contracted locally with no evidence of importation and no direct link to transmission from an imported case

Introduced case - A case contracted locally, with strong epidemiological evidence linking it directly to a known imported case (first-generation local transmission)

Induced case - A case the origin of which can be traced to a blood transfusion or other form of parenteral inoculation of the parasite but not to transmission by a natural mosquito-borne inoculation

Since the elimination of malaria in Sri Lanka over a decade ago, India has been the top country from which most imported cases originate, followed by Uganda, Sudan, Pakistan, and Madagascar.

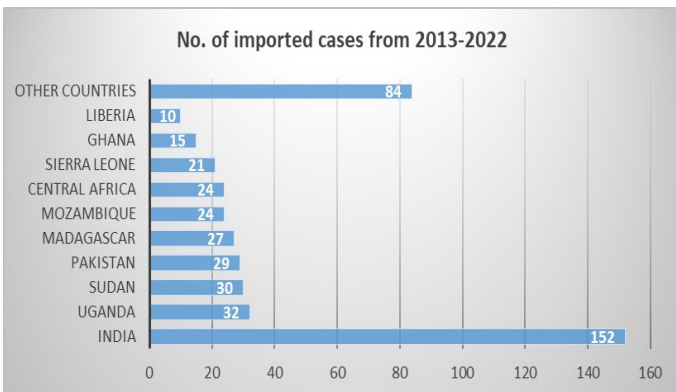


Figure 3- The top 10 countries from which most imported cases originated since 2013-2022

The majority of these imported malaria cases in Sri Lanka are reported from the Western Province, in the districts of Colombo, Gampaha, and Kalutara. The districts of Kandy, Rathnapura, and Galle also report a significant number of cases

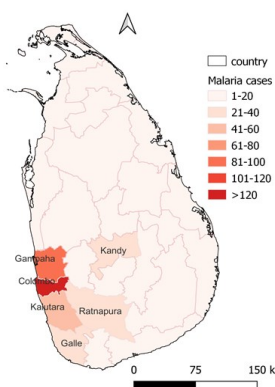


Figure 4- Distribution of imported cases by the district where they were detected (2013-2022)

Several high-risk populations have been identified as posing a threat to the re-establishment of malaria during the PoR phase in Sri Lanka, based on the profiles of the imported cases. These populations mainly comprise security forces

personnel returning from UN peacekeeping missions, gem traders, pilgrims, seafarers, resettled communities, refugees, asylum seekers, tourists from endemic countries, migrant workers, and illegal/irregular migrants.

To combat the threat of imported malaria, Sri Lanka has implemented a range of strategies in collaboration with various ministries and agencies, including the Ministry of Defense, Ministry of Buddha Sasana, Airports and Aviation Ministry, travel agents, private hospitals and laboratories, and the community. These strategies include proactive and reactive case detection, chemoprophylaxis, screening, vector surveillance and control, and entomological surveillance.

All individuals arriving in Sri Lanka from malaria-endemic countries, including Sri Lankan citizens returning from abroad and foreign visitors, are offered free screening. The screening involves a blood test to detect the presence of the Plasmodium parasite. If a positive case is detected, the individual is immediately treated, and efforts are made to trace and test any close contacts. This strategy has been successful in detecting and treating imported cases of malaria and preventing the further spread of the disease.

Moreover, Sri Lanka provides free chemoprophylaxis to travelers visiting malaria-endemic countries. The country also collaborates with international partners, including the World Health Organization and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), to strengthen its malaria elimination efforts. These partnerships provide funding and technical support to implement effective malaria prevention and reestablishment measures.

In conclusion, Sri Lanka's success in eliminating malaria is a remarkable accomplishment. However, it is crucial to recognize that the continued presence of malaria vectors and the risk of imported cases pose ongoing challenges to maintaining the country's malaria-free status.

Nonetheless, Sri Lanka's comprehensive approach to preventing re-establishment provides a strong foundation for ongoing efforts to keep the country malaria-free. By building on this foundation and continuing to prioritize malaria prevention and control, Sri Lanka can ensure that its hard-won achievement in eliminating malaria is sustained for years to come.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 18th-24th Mar 2023 (12th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hep-		Human		Chickenpox		Meningitis		Leishmania-		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	T*	C**	
Colombo	241	3612	0	3	1	7	0	1	0	6	8	58	0	0	0	2	0	0	0	7	67	1	8	0	3	23	91
Gampaha	137	3680	0	4	0	6	0	1	0	1	14	104	1	1	0	6	0	0	5	71	2	26	0	10	1	92	
Kalutara	28	1102	0	8	0	1	0	0	3	42	153	0	1	0	1	0	1	1	11	105	0	26	0	1	3	99	
Kandy	80	820	1	9	0	0	0	1	0	1	47	1	21	0	1	1	1	1	7	82	1	6	0	11	73	100	
Matale	33	306	0	1	0	0	0	1	0	2	7	29	1	2	0	2	0	0	0	17	0	2	3	89	22	100	
NuwaraEliya	2	46	0	21	0	0	0	0	7	2	27	1	18	0	0	0	0	0	1	30	1	4	0	0	46	100	
Galle	35	498	2	10	1	3	0	0	3	9	30	167	0	20	0	0	0	0	6	99	0	4	1	1	31	100	
Hambantota	20	272	0	1	0	0	0	0	4	0	3	61	1	33	0	9	0	0	1	38	0	7	19	116	35	100	
Matara	40	453	0	7	0	2	0	0	3	29	135	1	10	0	2	0	0	0	3	67	0	6	6	37	49	100	
Jaiffna	55	924	1	21	0	1	0	5	1	7	4	15	373	0	1	0	1	0	6	72	0	0	0	2	58	93	
Kilinochchi	2	45	0	2	0	0	0	0	0	0	6	1	4	0	0	0	0	0	0	4	0	0	0	0	17	98	
Mannar	1	30	0	4	0	0	0	0	0	0	2	17	1	4	0	0	0	0	1	1	0	2	0	0	15	80	
Vavuniya	1	49	0	5	0	1	0	0	0	0	13	0	6	0	1	0	0	0	0	8	0	1	1	1	0	92	
Mullaitivu	1	25	0	8	0	0	0	2	0	6	1	15	0	3	0	0	0	0	2	5	0	0	0	1	14	99	
Batticaloa	82	612	3	58	1	6	0	4	0	6	0	19	0	0	0	1	0	0	1	20	2	11	0	0	42	100	
Ampara	1	39	0	1	0	1	0	0	0	0	11	0	0	0	0	1	0	0	1	17	0	6	0	2	17	71	
Trincomalee	86	552	0	3	0	0	0	0	3	0	17	0	7	0	0	0	0	0	2	14	0	4	0	1	22	99	
Kurunegala	51	806	0	11	0	5	0	0	0	3	65	0	7	0	5	0	0	0	21	156	4	46	8	110	22	100	
Puttalam	53	1902	0	3	0	0	0	0	0	0	11	0	6	0	1	0	0	0	3	31	1	12	2	5	17	97	
Anuradhapur	8	157	0	1	0	0	0	1	0	1	4	102	0	23	0	1	0	0	1	72	0	8	10	139	20	97	
Polonnaruwa	13	205	0	4	0	2	0	0	0	6	3	45	0	5	1	6	0	0	6	26	0	9	9	117	24	100	
Badulla	18	381	1	11	1	3	0	0	2	6	6	86	1	13	5	33	0	0	4	48	1	7	0	7	61	100	
Monaragala	7	109	2	8	0	0	0	0	0	0	13	110	2	15	1	7	0	0	1	21	4	28	4	45	23	100	
Ratnapura	55	551	2	10	4	8	0	1	0	6	41	269	1	12	0	6	0	0	10	39	4	57	5	50	34	100	
Kegalle	60	679	1	3	0	0	0	0	2	4	7	102	2	11	1	2	0	0	14	112	5	14	1	10	31	99	
Kalmune	25	1030	0	18	1	2	0	0	0	0	1	11	0	0	0	0	0	0	1	10	0	8	0	0	33	100	
SRI LANKA	113	18885	13	235	9	48	0	17	8	81	21	1684	29	595	8	88	1	3	11	1232	26	302	69	758	32	97	

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 24th Mar, 2023. Total number of reporting units 358. Number of reporting units data provided for the current week: 321. C**=Completeness

Table 2: Vaccine-Preventable Diseases & AFP

18th–24th Mar 2023(12th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2023	Number of cases during same week in 2022	Total number of cases to date in 2023	Total number of cases to date in 2022	Difference between the number of cases to date in 2023 & 2022
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	01	01	00	00	00	00	00	03	02	22	20	10 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	04	01	00	01	00	00	00	01	07	01	51	10	410 %
Measles	00	00	00	00	00	00	00	00	00	00	01	08	10	- 20 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
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	01	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	02	01	100 %
Whooping Cough	00	00	00	00	00	00	00	00	01	01	00	03	00	0 %
Tuberculosis	41	05	11	09	09	29	05	16	06	131	450	1918	1969	- 2.5 %

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

Number of Malaria Cases Up to End of March 2023,
03
All are Imported!!!

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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