



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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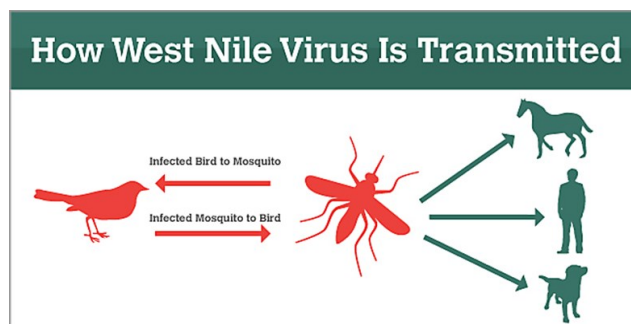
WEST NILE FEVER

West Nile Fever (WNF), a mosquito-transmitted disease caused by West Nile Virus (WNV) has emerged as one of the most common causes of epidemic meningoencephalitis worldwide. West Nile Virus is a flavivirus related to the viruses that cause St. Louis encephalitis, Japanese encephalitis, and yellow fever. WNV is primarily maintained in an enzootic transmission cycle between *Culex* species mosquitoes and birds as vertebrate hosts.

Humans and mammals are usually incidental, dead-end hosts as viral titers in mammals are insufficient to infect mosquitoes for further transmission to other mammals. West Nile virus is spread to humans through the bite of an infected female mosquito. The mosquitoes get the virus when they bite an infected bird. Thus, there is a cycle of the virus circulating from bird to bird by way of mosquito bites, being amplified at each cycle. Some bird species are more susceptible to the virus than others, especially the crow family (Corvidae). Finding dead crows can therefore signal the presence of West Nile disease so surveillance programs often target dead crows. But at least 110 other bird species can also carry the virus. Infection of other animals (e.g. horses, and humans) is incidental to the cycle in birds since most mammals do not develop enough virus in the bloodstream to spread the disease. Therefore, West Nile virus isn't spread between humans.

Most human infections are asymptomatic. West Nile virus can cause a fatal neurological disease in humans in less than 1 % of infected individuals, while asymptomatic infections occur in around 80 %. However, neuroinvasive disease characterized by meningitis, encephalitis, and/or acute flaccid paralysis is associated with significant morbidity and mortality. Severe illness can occur in people of any age. However, people over 60 years of age are at greater risk for severe illness if they are infected (1 in 50 people). People with certain medical conditions, such as cancer, diabetes, hypertension, kidney disease, and people who have received organ transplants, are also at greater risk. Recovery from severe illness might take several weeks or months. Some effects might be permanent. About 1 out of 10 people who develop severe illness affecting the central nervous system die.

Epidemic transmission occurs when the virus escapes the bird-to-bird enzootic cycle to infect other vertebrates, including humans. Outbreak sites are on major bird's migratory routes. First identified in the northwest West Nile area in Uganda in 1937. WNV was not viewed as a public health threat until it was associated with epidemics of fever and encephalitis in the Middle East in the 1950s. WNV caused only sporadic outbreaks of human disease globally until the mid-1990s. It was endemic in Africa, parts of Europe, the Middle East, West Asia, and Australia.



Source: https://www.mosquitomagnet.com/static/version1715239573/frontend/Woodstream/MosquitoMagnet/en_US/images/logo.png

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Human WNV infection has reportedly caused several outbreaks in neighboring India, including Kerala and Tamil Nadu, which are close to Sri Lanka. However, outbreaks have been reported in Asia. Sri Lanka reported few cases of WNF infection in 2015, identified in patients presenting with encephalitis or

Diagnosis and treatment

Laboratory diagnosis is generally accomplished by testing of serum or CSF to detect WNV-specific IgM antibodies. Reverse transcription-polymerase chain reaction (RT-PCR) should be considered in patients with immunocompromising conditions. No specific medicines are available to treat West Nile. Antibiotics do not treat viruses. Rest, fluids, and over-the-counter pain medications may relieve some symptoms. In severe cases, patients often need to be hospitalized to receive supportive treatment, such as intravenous fluids, pain medication, and nursing care.

PREVENTION AND CONTROL

West Nile fever is a disease listed by the (World Organization for Animal Health) WOAHP requiring member countries to report its occurrence.

Surveillance programs in wild or sentinel birds allow the competent authorities to take appropriate measures to protect animals and people. As birds in the crow family are very susceptible, these programs often encourage people to report dead crows for testing.

Reducing the risk of infection in people

The only way to reduce infection in people is by raising awareness of the risk factors and educating people about the measures they can take to reduce exposure to the virus, in the absence of a vaccine.

Public health educational messages should focus on reducing the risk of mosquito transmission. Efforts to prevent transmission should first focus on personal and community protection against mosquito bites using mosquito nets, and personal insect repellent, wearing light-colored clothing (long-sleeved shirts and trousers), and avoiding outdoor activity at peak biting times. In addition, community programs should encourage communities to destroy mosquito breeding sites in residential areas. To reduce the risk of animal-to-human transmission, gloves, and other protective clothing should be worn while handling sick animals or their tissues, during slaughtering and culling procedures.

To reduce the risk of transmission through blood transfusion and organ transplant, blood and organ donation restrictions and laboratory testing should be considered at the time of the outbreak in the affected areas after assessing the local/regional epidemiological situation.

Vector Control

Comprehensive, integrated mosquito surveillance and control programs should be developed in areas where the virus occurs to effective prevention of human WNV infections. Studies should identify locally existing mosquito species that play a role in WNV transmission, including those that might serve as a “bridge” from birds to human beings. Emphasis should be

on integrated control measures including source reduction with community participation. Proper water management, chemicals, and biological control methods are important.

Preventing infection in health-care settings

Health-care workers should implement standard infection control precautions when caring for patients with suspected or confirmed WNV infection, or handling specimens from them. Samples taken from people and animals with suspected WNV infection should be handled by properly trained staff working in suitably equipped laboratories.

When to seek medical care?

The majority of those infected with the West Nile virus will have no or only mild symptoms. But if any of these serious symptoms appear, need to seek medical care right away: Such as High fever, Severe headache, Stiff neck, Confusion, Muscle weakness, Vision loss, Numbness, Paralysis, Tremors, Seizures, and Coma.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 11th-17th May 2024 (20th 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	A	B	A	B	T*	C**
Colombo	133	4759	0	9	1	5	5	36	0	5	10	185	0	8	2	7	0	0	10	208	0	13	0	0	0	59	844	93	100
Gampaha	70	2096	1	13	0	6	2	7	0	4	21	277	0	3	1	2	0	0	9	144	6	52	1	10	21	479	86	99	
Kalutara	50	1391	1	16	0	1	2	25	2	15	7	290	0	5	1	7	0	0	11	292	4	31	0	0	4	219	100	100	
Kandy	98	1980	0	14	0	0	0	6	0	19	3	109	1	13	0	4	1	1	9	235	0	11	0	19	31	263	100	100	
Matale	9	364	0	2	0	0	0	2	0	17	4	50	0	1	0	4	0	0	4	59	0	6	6	110	2	56	100	100	
Nuwara Eliya	2	192	4	44	0	4	1	5	6	149	6	92	1	26	0	3	0	0	6	109	2	6	0	0	3	120	92	100	
Galle	24	1122	4	24	0	9	0	7	2	35	16	328	3	52	0	6	0	1	22	303	2	36	0	3	6	173	70	100	
Hambantota	9	514	2	20	0	1	0	3	3	36	3	268	0	18	0	3	0	0	10	142	1	15	9	215	1	45	92	100	
Matara	13	427	0	4	0	3	0	2	0	4	11	155	0	9	0	2	0	0	7	167	1	42	3	41	5	54	100	100	
Jaffna	16	4984	2	35	0	2	0	3	0	22	0	12	2	359	0	3	0	1	4	130	0	7	0	0	10	129	93	93	
Kilinochchi	1	269	0	5	0	0	0	2	0	2	0	15	0	7	0	0	0	0	0	5	0	4	0	0	0	9	100	100	
Mannar	0	184	1	2	0	0	0	1	0	0	1	17	1	7	0	1	0	0	0	4	0	3	0	1	3	29	100	100	
Vavuniya	2	131	3	3	1	1	0	1	0	7	1	57	0	2	0	4	0	0	3	20	0	7	0	6	1	12	75	100	
Mullaitivu	0	181	0	4	0	0	0	0	0	2	0	53	0	10	0	0	0	0	0	2	0	0	0	1	6	14	100	100	
Batticaloa	17	1092	2	68	0	7	1	5	0	16	1	34	0	1	1	9	0	0	7	59	1	24	0	1	3	57	100	100	
Ampara	3	150	0	14	0	2	0	0	0	12	3	130	0	1	0	4	0	0	2	58	1	23	1	7	1	74	86	100	
Trincomalee	12	480	0	10	0	0	0	2	0	2	3	110	0	10	0	0	0	0	2	30	1	8	0	8	0	35	100	100	
Kurunegala	44	1340	2	18	0	17	0	1	1	343	3	289	0	16	0	2	0	2	8	213	7	131	18	256	23	215	72	100	
Puttalam	13	654	0	1	0	1	0	3	0	0	4	134	0	5	0	1	0	0	1	68	0	28	2	15	2	74	92	100	
Anuradhapura	7	493	2	7	0	2	0	1	0	9	7	227	1	25	0	7	0	0	10	109	1	22	23	379	14	114	83	100	
Polonnaruwa	3	206	0	13	0	0	0	1	0	2	4	139	0	1	0	2	0	0	2	74	1	18	16	208	2	45	100	100	
Badulla	2	514	0	11	0	4	2	2	2	23	18	260	1	14	0	10	0	0	9	147	0	13	0	12	5	89	88	100	
Monaragala	14	420	2	7	0	2	1	2	1	69	11	466	1	18	0	13	0	0	1	54	2	51	3	101	5	36	73	100	
Ratnapura	72	1241	2	49	0	3	1	4	0	8	40	752	0	12	1	14	0	2	7	143	2	60	0	75	10	136	85	100	
Kegalle	48	1138	0	7	0	4	0	5	2	6	9	269	1	10	1	6	0	1	30	381	1	31	1	16	5	135	82	100	
Kalmunai	1	529	2	13	0	0	0	0	0	5	2	44	0	1	0	1	0	0	7	109	0	8	0	0	2	56	92	100	
SRILANKA	663	26851	30	413	2	74	15	126	19	812	188	4762	12	634	7	115	1	8	181	3265	33	650	84	1489	219	3512	91	99	

Source: Weekly Returns of Communicable Diseases (esurveillance.avid.gov.lk). T=Timeliness refers to returns received on or before 17th May, 2024. Total number of reporting units 358. Number of reporting units data provided for the current week: 357. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

11th–17th May 2024 (20th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2024	Number of cases during same week in 2023	Total number of cases to date in 2024	Total number of cases to date in 2023	Difference between the number of cases to date in 2024 & 2023
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	01	01	00	00	00	00	00	02	02	33	31	6.4 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	03	00	00	00	02	01	02	00	01	09	05	119	88	35.2 %
Measles	00	00	00	00	00	00	00	00	00	09	00	210	00	0 %
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	01	02	03	-33.3 %
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	01	02	-50 %
Whooping Cough	02	00	00	00	00	01	00	00	00	03	01	09	04	55.5 %

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

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**

ON STATE SERVICE

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