WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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WEER SRI LANKA 2023

Trends of Leptospirosis in Sri Lanka for the year 2022 Part I

This is the first article of series of two articles that describes about Trends of Leptospirosis in Sri Lanka for the year 2022

Why is it important to consider leptospirosis?

Leptospirosis is a quintessential example of a 'one health' disease of humans and animals caused by the spirochete bacteria of the genus *Leptospira*. It is a potentially serious bacterial zoonotic disease, frequently found in tropical climates, with the ability of causing a wide range of symptoms; with a spectrum of human disease ranging from subclinical infection to severe syndrome of multi-organ infections with high mortality. The global burden of the disease is yet not reliable with estimates of over 1 million cases and close to 59000 deaths annually[1]. These estimates infer that leptospirosis is a leading zoonotic cause of morbidity and mortality.

Can we quantify the burden of leptospirosis?

A systematic review to estimate the burden of leptospirosis in Sri Lanka revealed that annual caseloads are estimated to be in the 10,000 range with an estimated number of annual deaths due to leptospirosis to be 730 and estimated pooled case fatality ratio of 7.0%[2]. Further research conducted in Sri Lanka such as the prospective study in 3 hospitals in the Western Province in 2015 revealed that of the serologically confirmed cases of leptospirosis, over 68% demonstrated severe disease, while only 25% had jaundice[3].

Diagnosis can be easily missed in suspected cases presenting as an acute febrile illness with an epidemiological history. A cross-sectional study conducted in five hospitals in the Western Province in 2019 on the prevalence of concomitant dengue fever and leptospirosis revealed that 7.7% of patients with confirmed dengue infections were found to have concomitant leptospirosis as well[4].

Clinical diagnosis of leptospirosis is quite challenging due to its extreme variations in clinical manifestations and multiple complications. While early laboratory diagnosis is crucial; continuous epidemiological surveillance is required for targeted control and preventive measures.

What was the trend of Leptospirosis in Sri Lanka in 2022?

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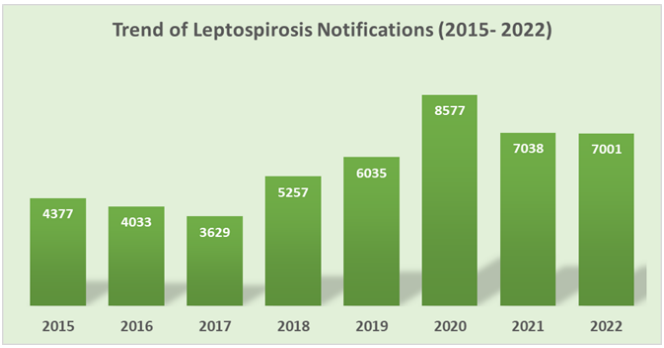
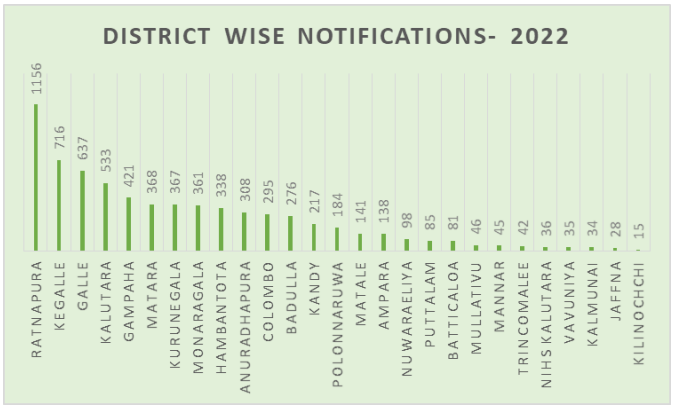


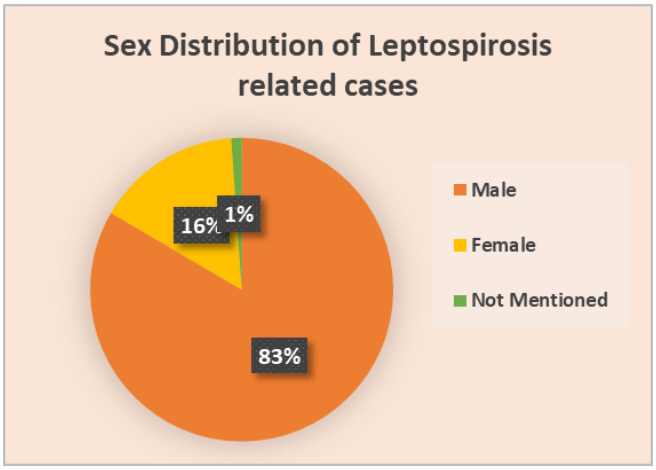
While there has been a steady rise in notifications from 2015 onwards with over 8000 notifications seen in 2020, over the past 2 years in 2021 and 2022, notifications

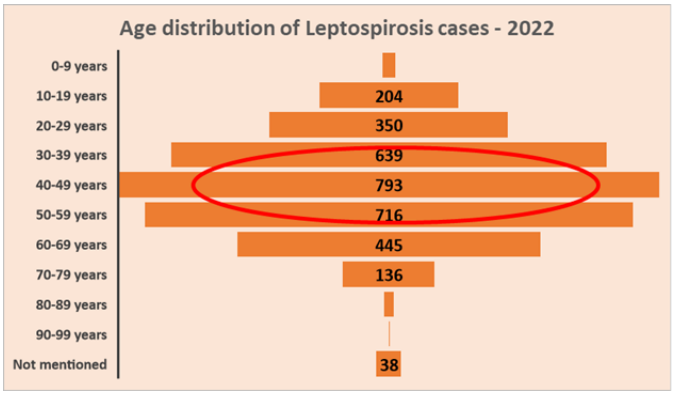


were in the range of 7000.
District-wise notifications for the year 2022, showed a preponderance in the Rathnapura district (n=1156; 16.5%), followed by the Kegalle (n=716, 10.2%) and Galle (n=637, 9.1%) districts.

What were the age and sex patterns seen in confirmed cases of Leptospirosis?

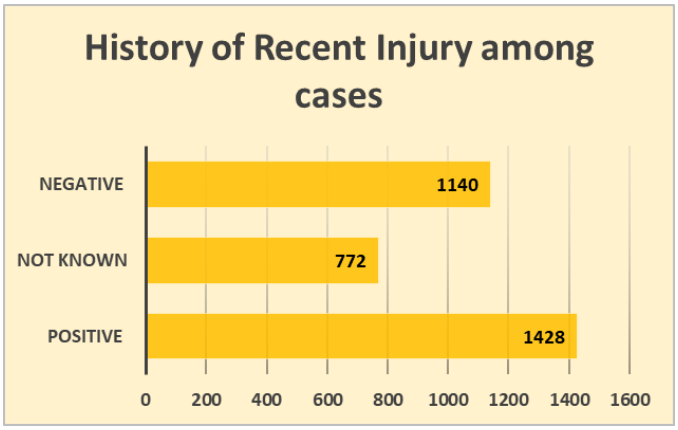
As has often been noted, there was a significantly higher preponderance of the disease among males (83%) in comparison to females (16%). Age categories from 30 to 60 years were the most impacted with the 40–49year age group displaying the highest number of cases (n=793). Important to note is that there are still notifications which are being sent to the Epidemiology Unit without clear documentation of the sex and age of the patient.

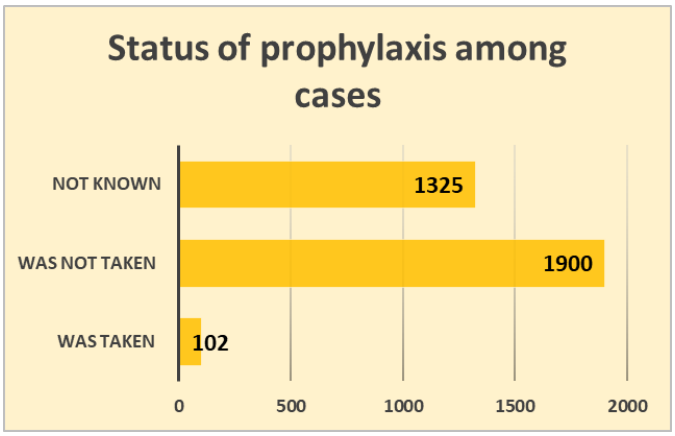




What were the other characteristics seen among cases of leptospirosis?

A history of injury was noted in over 42% (n=1428) of the confirmed cases while 23% (n=772) were not known. Similarly, over 56% (n=1900) of the cases had not taken chemoprophylaxis while the status of taking prophylaxis was not known in 39.5% (n=1325) according to the case investigation formats received.





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to be continued

Table 1: Selected notifiable diseases reported by Medical Officers of Health 22nd- 28th Apri 2023 (17th 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	271	4939	0	3	0	7	0	1	0	6	6	92	0	0	0	2	0	0	9	101	0	12	0	5	**25**	**91**
Gampaha	123	4929	1	6	0	6	0	1	0	1	17	175	0	2	0	6	0	0	3	85	1	30	0	13	**1**	**88**
Kalutara	90	1591	0	10	0	1	0	0	0	4	15	267	0	1	0	1	0	1	17	163	2	32	0	1	**4**	**97**
Kandy	126	1348	1	14	0	0	0	3	1	12	10	90	1	30	0	2	0	1	4	111	2	10	0	13	**79**	**100**
Matale	30	492	1	2	0	0	0	1	1	5	4	56	1	6	1	3	0	0	2	24	0	2	9	126	**21**	**100**
NuwaraEliya	3	61	0	31	0	0	0	0	0	9	0	31	0	25	0	1	0	0	3	46	0	4	0	0	**54**	**100**
Galle	49	744	1	15	2	9	0	0	2	12	37	363	0	23	0	0	0	0	10	138	2	7	0	1	**32**	**100**
Hambantota	44	513	1	2	0	1	0	1	0	8	22	112	2	44	0	9	0	0	8	64	0	11	29	217	**32**	**100**
Matara	43	619	0	7	1	5	0	0	0	5	10	223	0	17	0	2	0	0	5	94	0	7	5	63	**49**	**100**
Jaffna	74	1232	1	38	0	1	0	6	1	9	0	7	5	432	0	1	0	1	0	96	0	2	0	2	**61**	**93**
Kilinochchi	2	55	0	3	0	0	0	0	0	15	0	6	1	5	0	0	0	0	1	6	0	0	0	0	**18**	**100**
Mannar	4	44	0	5	0	0	0	1	0	0	2	24	0	4	0	0	0	0	0	1	0	2	0	0	**20**	**99**
Vavuniya	7	74	0	5	0	1	0	0	0	0	0	18	0	6	0	1	0	0	0	9	0	1	0	2	**0**	**91**
Mullaitivu	6	42	0	8	0	0	0	2	0	11	1	21	0	3	0	0	0	0	4	9	0	0	0	3	**24**	**98**
Batticaloa	114	1159	1	65	0	6	0	4	1	8	3	36	0	1	0	3	0	0	1	26	2	14	0	0	**43**	**100**
Ampara	0	40	0	1	0	1	0	0	0	0	0	12	0	0	0	1	0	0	0	17	0	7	0	2	**15**	**55**
Trincomalee	122	1160	1	4	0	1	0	0	0	4	3	29	0	9	0	0	0	0	1	19	0	6	0	1	**23**	**97**
Kurunegala	54	1069	0	13	0	6	0	0	1	1	13	109	1	9	0	7	0	1	6	212	2	60	24	158	**21**	**99**
Puttalam	0	2050	0	4	0	1	0	0	0	0	0	11	0	6	0	1	0	0	0	51	0	17	0	9	**16**	**90**
Anuradhapur	0	192	0	1	0	0	0	1	0	1	0	129	0	23	0	2	0	0	0	92	0	13	0	177	**20**	**96**
Polonnaruwa	0	243	0	5	0	4	0	0	0	6	0	66	0	5	0	8	0	0	0	35	0	9	0	150	**29**	**100**
Badulla	0	449	0	12	0	3	0	0	0	18	0	109	0	22	0	43	0	0	0	62	0	16	0	7	**63**	**100**
Monaragala	0	173	0	11	0	2	0	0	0	0	0	248	0	25	0	12	0	0	0	25	0	30	0	64	**25**	**100**
Ratnapura	0	708	0	10	0	9	0	1	0	8	0	410	0	14	0	7	0	0	0	58	0	72	0	67	**35**	**100**
Kegalle	0	900	0	6	0	0	0	0	0	6	0	144	0	14	0	2	0	0	0	134	0	22	0	12	**29**	**99**
Kalmune	36	1234	1	25	0	6	0	0	0	0	0	14	0	0	0	0	0	0	2	23	0	10	0	0	**39**	**100**
SRILANKA	**119**	**26060**	**9**	**306**	**3**	**70**	**0**	**22**	**7**	**149**	**14**	**2802**	**11**	**726**	**1**	**11**	**0**	**4**	**76**	**1701**	**11**	**396**	**67**	**1093**	**33**	**97**

Source: Weekly Returns of Communicable Diseases (esurvillance.epid.gov.lk). T=Timeliness refers to returns received on or before 28th April, 2023 Total number of reporting units 358 Number of reporting units data provided for the current week: 312 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

22nd– 28st Apr 2023(17th 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*	00	00	00	00	01	00	00	00	00	01	02	26	31	- 16.1 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	01	00	00	00	01	00	00	00	02	01	73	14	421.4 %
Measles	00	00	01	00	00	00	00	00	00	01	00	11	10	10 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	01	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	01	01	04	- 75 %
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	00	00	00	03	01	200 %
Tuberculosis	179	22	37	00	21	16	12	11	36	334	27	2917	2446	19.2 %

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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