



# WEEKLY EPIDEMIOLOGICAL REPORT

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## Long COVID-19 syndrome Part I

This is the first article of a series of two articles.

sis.

The term ‘long COVID-19’ includes both the ongoing symptomatic disease and post Covid-19 syndrome.

### Introduction

Even though the majority of persons who are infected with COVID-19 infection, experience symptoms of mild to moderate severity, some (10%- 15%) develop severe disease and very few (5%) become seriously ill. Generally, patients who are infected with COVID-19 recover following 2 – 6 weeks of infection and regain normal health. For some persons, symptoms of COVID-19 persist over weeks or months following the recovery from the acute infection even though they remain non-infectious during this period.

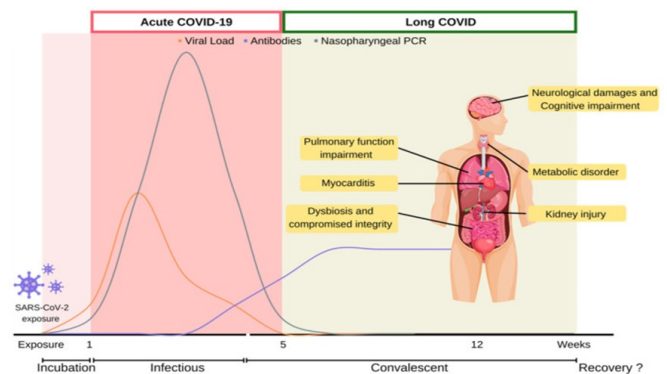


Figure 1 – Disease course of COVID-19

### Definitions

There are 3 phases of the COVID-19 infection as described in the guidelines issued by the National Institute for Health and Care Excellence (UK NICE) to identify long-term consequences of COVID-19 infection.

According to it, **acute COVID-19** - can be defined as signs and symptoms of COVID-19 that last for up to 4 weeks. Persons who are suffering from signs and symptoms of COVID-19 for 4 to 12 weeks following the onset of acute symptoms are defined as **ongoing symptomatic COVID-19 disease**. **Post-COVID-19-syndrome** is defined as persistent COVID-19 disease in persons who are suffering from signs and symptoms for more than 12 weeks following the onset of acute symptoms, and cannot be explained by an alternative diagnosis.

### Prevalence of long COVID

It was found that approximately 31%–69% of COVID-19 survivors will have long COVID symptoms following initial recovery from SARS-CoV-2 infection.

Similar prevalence was observed in a study done in India where the prevalence of long COVID was found to be 29.2% (95% CI 25.3%, 33.4%) in patients who were diagnosed with SARS-CoV2 infection. A high (62.5%) prevalence was found among severe cases compared to patients with mild/moderate disease whose prevalence was 23.4 %.

### Symptoms

Depending on the available data, it is clear that the long COVID includes a wide range of symptoms indicating multi-organ involvement.

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According to a systematic review done, the long COVID-19 syndrome is characterized by weakness (41%), general malaise (33%), fatigue (31%), concentration impairment (26%) and breathlessness (25%). The majority (82%) of the studies reviewed there were cohort studies followed by cross-sectional (15%) and case-control (3%). However, only the studies done in Europe, Asia, North America and the Middle East were included. Studies from low and middle-income countries were not included in this review.

According to another study, the most common symptoms were fatigue (64.8%) followed by cough (32.4%).<sup>4</sup> Pooled prevalence data for the symptoms of long COVID was assessed in another review. According to it, the most commonly reported symptoms were fatigue (47%), dyspnea (32%), myalgia (25%), joint pain (20%), headache (18%), cough (18%), chest pain (15%), altered smell (14%), altered taste (7%) and diarrhoea (6%).

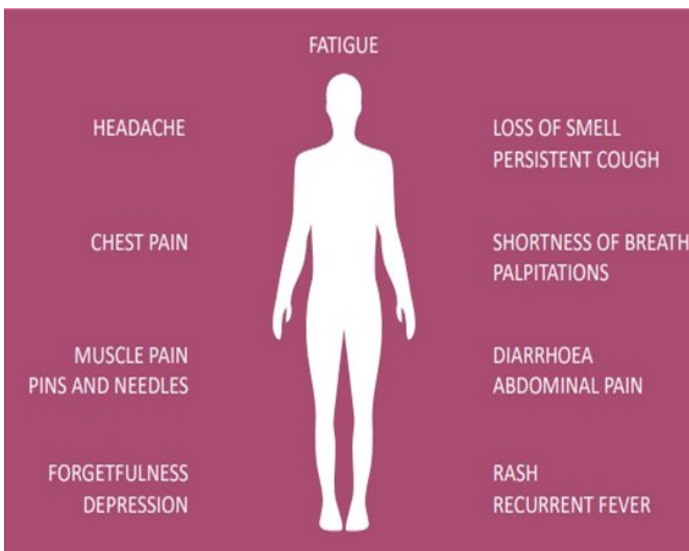


Figure 2 – Symptoms of long COVID<sup>1</sup>

**Pathophysiology**

The pathophysiology of long COVID-19 is still uncertain. It is thought that organ damage from the acute phase of the infection is likely to cause symptoms. However, specific long-lasting inflammatory mechanisms have also been proposed. The main underlying pathophysiological mechanisms include Immune dysregulation, autoimmunity, endothelial dysfunction, occult viral persistence and coagulation activation. Also, autonomic nervous system damage could account for many symptoms without clear evidence of organ damage.

Compiled By:

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**Table 1 : Water Quality Surveillance**  
**Number of microbiological water samples September 2022**

District	MOH areas	No: Expected *	No: Received
Colombo	15	90	NR
Gampaha	15	90	NR
Kalutara	12	72	NR
Kalutara NIHS	2	12	NR
Kandy	23	138	NR
Matale	13	78	
Nuwara Eliya	13	78	NR
Galle	20	120	NR
Matara	17	102	NR
Hambantota	12	72	NR
Jaffna	12	72	
Kilinochchi	4	24	NR
Manner	5	30	
Vavuniya	4	24	
Mullatvu	5	30	
Batticaloa	14	84	NR
Ampara	7	42	
Trincomalee	11	66	NR
Kurunegala	29	174	NR
Puttalam	13	78	NR
Anuradhapura	19	114	NR
Polonnaruwa	7	42	
Badulla	16	96	NR
Moneragala	11	66	NR
Rathnapura	18	108	NR
Kegalle	11	66	
Kalmunai	13	78	

\* No of samples expected (6 / MOH area / Month)  
 NR = Return not received

**Table 1: Selected notifiable diseases reported by Medical Officers of Health 08<sup>th</sup>-14<sup>th</sup> Oct 2022 (41<sup>st</sup> Week)**

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hepa-		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	10	10435	0	4	0	3	0	1	0	7	3	176	0	1	0	5	0	2	0	40	0	11	1	3	15	96
Gampaha	11	7002	0	5	0	1	0	1	0	12	11	224	0	0	0	11	0	4	4	59	0	34	0	33	6	87
Kalutara	43	3322	0	26	0	1	0	2	0	6	9	382	0	4	0	5	0	4	8	79	1	25	0	2	2	52
Kandy	87	4573	0	20	0	1	0	3	2	13	4	152	0	31	0	8	0	0	1	68	3	13	1	35	13	98
Matale	39	1048	2	10	0	0	0	0	0	0	5	92	1	6	0	6	0	1	2	41	0	1	10	290	19	100
NuwareEliya	4	202	0	24	0	0	0	3	0	5	2	81	1	16	0	7	0	0	0	36	0	6	0	0	28	94
Galle	23	3161	0	10	0	1	1	1	0	1	14	411	0	32	0	6	0	0	6	71	0	22	0	0	14	100
Hambantota	19	1426	0	32	0	0	0	0	0	2	9	214	2	48	0	6	0	0	6	37	0	17	9	454	17	99
Matara	25	1509	0	14	0	2	1	1	0	1	7	235	0	12	0	2	0	0	2	46	0	8	1	226	31	100
Jaffna	66	2818	6	97	0	3	1	64	0	62	0	22	19	479	0	8	0	4	7	103	1	13	0	1	66	93
Kilinochchi	2	113	0	8	0	0	0	3	0	24	0	11	0	12	0	0	0	0	4	2	5	0	2	2	25	99
Mannar	3	190	1	3	0	0	1	1	0	0	1	27	1	5	0	2	0	0	6	1	16	0	0	0	17	80
Vavuniya	2	81	1	4	0	1	0	2	0	2	0	18	0	1	0	0	0	0	29	0	0	0	0	4	2	99
Mullaitivu	0	62	0	5	0	0	0	2	0	6	0	26	1	6	0	0	0	0	10	0	2	0	2	0	21	95
Batticaloa	18	1086	9	74	1	9	0	0	0	21	3	41	0	0	0	1	0	1	3	32	0	31	0	2	39	98
Ampara	1	158	0	13	0	2	0	0	0	17	0	96	0	1	0	1	0	0	4	49	2	38	0	13	10	100
Trincomalee	6	1075	0	25	0	0	0	1	0	2	2	28	0	3	0	4	0	0	41	0	8	0	1	1	15	91
Kurunegala	37	2369	1	22	0	2	0	0	0	4	2	138	3	31	0	2	0	3	8	89	1	41	8	404	10	100
Puttalam	35	1869	0	5	0	1	0	1	0	0	3	31	0	8	0	1	0	0	1	21	0	28	0	5	16	91
Anuradhapur	4	411	1	12	0	2	0	1	0	7	4	160	0	25	0	2	0	1	0	65	0	47	1	325	9	97
Polonnaruwa	0	137	0	6	0	1	0	0	0	2	0	106	0	1	0	5	0	0	20	0	5	2	435	15	98	
Badulla	25	950	0	24	0	3	0	1	0	14	3	235	3	56	3	132	0	0	4	59	2	15	2	26	19	100
Monaragala	13	443	2	10	1	2	0	4	19	22	6	252	0	31	3	56	0	0	2	59	4	55	11	139	13	100
Ratnapura	29	2603	1	43	0	6	0	3	0	33	24	881	0	22	0	26	0	1	0	68	1	60	1	181	14	94
Kegalle	37	2603	0	15	0	8	0	1	0	8	9	476	0	19	0	9	0	0	1	97	1	46	1	21	10	99
Kalmune	32	1047	0	31	0	1	0	3	0	6	1	26	0	1	0	1	0	0	0	57	0	35	0	0	31	100
<b>SRI LANKA</b>	<b>77</b>	<b>50693</b>	<b>24</b>	<b>542</b>	<b>2</b>	<b>50</b>	<b>4</b>	<b>99</b>	<b>21</b>	<b>277</b>	<b>12</b>	<b>4541</b>	<b>31</b>	<b>851</b>	<b>6</b>	<b>306</b>	<b>0</b>	<b>21</b>	<b>59</b>	<b>1286</b>	<b>19</b>	<b>582</b>	<b>48</b>	<b>2604</b>	<b>18</b>	<b>96</b>

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 14<sup>th</sup> Oct, 2022 Total number of reporting units 367 Number of reporting units data provided for the current week 307 C\*\*=Completeness

**Table 2: Vaccine-Preventable Diseases & AFP**

**08<sup>th</sup>- 14<sup>th</sup> Oct 2022 (41<sup>st</sup>Week)**

Disease	No. of Cases by Province									Number of cases during current week in 2022	Number of cases during same week in 2021	Total number of cases to date in 2022	Total number of cases to date in 2021	Difference between the number of cases to date in 2022 & 2021
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	00	00	01	00	02	00	65	51	21.5 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	01	00	00	00	00	00	00	01	03	73	62	17.7 %
Measles	00	00	00	00	00	00	00	00	00	00	00	19	11	72.7 %
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	01	05	03	66.6 %
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	04	- 75 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Tuberculosis	00	05	05	10	10	04	00	11	14	59	242	5314	4044	31.4 %

**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

Influenza Surveillance in Sentinel Hospitals - ILI & SARI							
Month	Human				Animal		
	No Total	No Positive	Infl A	Infl B	Pooled samples	Serum Samples	Positives
September							

Source: Medical Research Institute & Veterinary Research Institute

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](mailto: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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