WER SRI LANKA 2020

Lessons Learned: Different Country Models and Their Responses to Covid-19 Part I

This is the first of a series of 3 articles.

On the 31 December 2019, Chinese authorities notified the World Health Organization (WHO) of an outbreak of pneumonia in Wuhan city, which was later classified as a new disease: COVID-19. The WHO, on 30 January 2020, declared the outbreak of COVID-19 as a "Public Health Emergency of International Concern" (PHEIC). By, 11 March 2020, the WHO had named it as the first pandemic caused by a coronavirus. As a new virus, the lack of immunity and absence of an effective vaccine means that COVID-19 had and still has the potential to spread extensively. Compiled data also indicates that we are all susceptible to catching this disease. Among those who are infected, almost 80% are likely to have no to mild symptoms, while 15% show severe disease and 5% are critically unwell. Policymakers around the world find themselves in uncharted territory and therefore, continue to struggle to combat the COVID-19 infection. Delaying spread of the infection is imperative so that cases occur over a wider space of time without overwhelming health systems around the world. While most countries have been trying to achieve this goal through the time-tested arsenal of public health – testing people and tracing contacts including restrictive measures such as quarantines and closing of public spaces, some countries have adopted different strategies. This article sets out a summary of different methods and measures taken by different countries in the fight against COVID-19.

China

China reported its first case of COVID-19 in December 2019. While cases steadily increased in January, by the beginning of March, the continuing increase stalled at around 80000 cases. At the time of drafting this article, there was a total of 84,505 confirmed cases and 4645 deaths, with five new cases for the day, compared to the more than 2,000 new cases which were being confirmed daily in mid-February[1]. In what can possibly be done only in China; wide sweeping measures were carried out by government authorities over a three-month period that contained the virus as best it could. These measures included an immediate lockdown on the epicenter of the outbreak – the Hubei Province. Other areas of China were also subject to lockdowns and strict social distancing measures along with closure of schools and universities. In order to better limit transmission, the Chinese approach also involved tailor made location-specific responses according to the differing ground realities. Several important

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measures were carried out, such as active case surveillance, rapidly increased testing capacity, strong emphasis on behavioral risk reduction strategies such as hand and respiratory hygiene, compulsory use of masks in the general population, along with identification of essential services which were delivered through organized, government-controlled arrangements. Businesses which constituted 'essential services' were required to provide atleast basic personal protective equipment and encourage frequent hand washing. A work from home policy was instigated for non-essential businesses. Strict quarantining of contacts and high risk groups and hospitalization of confirmed cases along with rapid diversion of resources towards building hospitals and allocating health care professions dedicated to managing COVID-19 infection contributed to their successful control over the COVID-19 infection.[2,3,4] Presently, these containment measures are gradually being lifted with more focus on mitigating the risk of COVID-19 across the population over a longer period by integrating infection prevention and control as a routine part of their daily lives.

South Korea

South Korea had its first confirmed case in late January 2020.

Due to a mass infection as a result of a "super spreader" at a church in South Korea's south east region during a mass gathering – a surge of cases was experienced in mid-February, with over 800 new cases being reported daily at the beginning of March. However, after beginning of May, the number of new cases identified daily had significantly decreased to around 15-40. Currently, a total of 11,110 cases have been confirmed with 263 deaths at the time of writing[1]. The South Korean government took a wide range of crucial steps in conjunction with key factors in their healthcare system that enabled them to achieve a grip on controlling the COVID -19 infection. Ensuring transparent communication on new cases, mortality and regional distribution of cases, gained public trust and increased the public's voluntary acceptance on practicing social distancing measures. Minimum level of travel restrictions were imposed and there was no ban on air travel except to Hubei province in China. The need to negate the economic impact of COVID 19, did not involve a ban on public gatherings and restaurants and shops remained open. Instead, us-

ing the three guiding principles of 'test, trace and contain'; South Korea carried out extensive contact tracing leading to strict quarantine measures along with expansive testing by outdoor drive through and walk- through testing stations for early detection.[5] Private hospitals also provided free testing. Fast track approval was enabled, and test kits were rapidly produced. This led to early detection and self-isolation to prevent the infection. People who tested positive had to also describe their recent movements supported by GPS phone tracking which enabled health officials to issue alerts as to where infected people had been before they were confirmed as positive for COVID-19. Information and Communication Technology (ICT) was greatly utilized in South Korea – for example - in allowing doctors to perform telemedicine; use of Artificial Intelligence (AI) to facilitate speedy testing; mobile applications for self-diagnosis and monitoring of those under self-quarantine by setting off alarms when the user ventured out of a designated quarantine area; use of AI in developing platforms to find substances to treat COVID-19 including real time-data of publicly-distributed face masks provided to people through mobile applications therefore reducing confusion and inconvenience while raising distribution efficiency.[6] Their flexibility in responding to the outbreak from hospitalization of all positive patients towards prioritizing patients based on severity was also beneficial. Also identified was the need to improve on their provision of welfare programs geared towards their vulnerable population which is now in the process of being carried out. Correspondingly, due to universal health coverage in South Korea, all patients also had easy access to treatment with financial burden of patients being minimized for patients which was of great benefit as well.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health   25th– 01st May 2020 (18th Week)

RDHS Division	Dengue Fever A	Dengue Fever B	Dysentery A	Dysentery B	Encephalitis A	Encephalitis B	Enteric Fever A	Enteric Fever B	Food Poisoning A	Food Poisoning B	Leptospirosis A	Leptospirosis B	Typhus Fever A	Typhus Fever B	Viral Hepatitis A	Viral Hepatitis B	Human Rabies A	Human Rabies B	Chickenpox A	Chickenpox B	Meningitis A	Meningitis B	Leishmaniasis A	Leishmaniasis B	WRCD T*	WRCD C**
Colombo	10	2733	0	13	0	5	0	4	0	14	3	66	0	0	0	2	0	0	0	155	0	16	0	0	59	96
Gampaha	3	1617	0	5	0	0	0	0	0	19	0	44	0	1	0	2	0	0	0	193	0	8	0	17	50	86
Kalutara	8	975	0	5	0	4	0	3	3	4	5	129	1	9	0	1	0	0	13	173	0	9	0	0	51	100
Kandy	10	1124	0	8	0	1	0	7	0	7	2	25	0	40	0	3	0	0	6	109	0	14	5	30	62	98
Matale	7	446	1	4	0	2	0	1	0	4	3	23	0	2	0	2	0	1	3	37	0	1	12	140	62	100
NuwaraEliya	0	109	0	10	0	0	0	0	0	0	2	13	4	37	0	1	0	0	2	50	0	6	0	0	23	94
Galle	8	982	0	13	0	8	0	2	0	12	12	184	0	21	0	1	0	0	1	201	0	18	0	2	57	77
Hambantota	3	262	0	4	0	0	1	2	0	37	0	53	0	14	0	2	0	0	0	104	0	8	0	231	73	86
Matara	0	351	0	7	0	3	0	0	0	0	0	81	0	4	0	6	0	0	0	68	0	5	0	117	49	54
Jaffna	18	1761	1	41	0	0	1	17	1	17	0	10	3	441	0	0	0	1	1	72	0	6	0	0	36	93
Kilinochchi	0	104	2	22	0	0	0	3	0	0	1	7	3	21	0	0	0	0	0	8	1	5	1	4	69	100
Mannar	0	117	0	0	0	0	0	1	0	0	0	3	0	1	0	0	0	0	0	1	0	3	0	0	40	91
Vavuniya	1	232	0	5	0	0	0	4	2	2	0	32	0	1	0	1	0	0	2	22	0	4	0	1	61	100
Mullaitivu	0	64	0	4	0	0	0	4	0	1	0	12	0	3	0	1	0	1	0	4	0	2	0	5	39	83
Batticaloa	24	2070	4	42	0	2	0	0	5	10	1	14	0	0	0	1	0	1	0	69	1	10	0	1	57	98
Ampara	3	285	2	10	1	1	0	0	0	0	21	51	0	0	0	1	0	0	5	83	1	11	0	4	63	100
Trincomalee	1	2205	0	4	0	0	0	0	1	2	0	12	0	2	0	0	0	0	5	69	0	5	0	0	46	92
Kurunegala	0	649	0	5	0	4	0	2	0	29	0	54	0	10	0	1	0	0	2	236	0	8	0	153	55	82
Puttalam	5	344	0	6	1	1	0	2	0	1	0	16	0	9	0	9	1	1	0	58	0	17	0	2	61	95
Anuradhapur	0	311	1	10	0	0	0	2	0	19	3	118	1	13	1	2	1	1	4	108	1	18	0	81	51	85
Polonnaruwa	1	184	0	4	0	0	0	0	0	0	0	55	0	0	0	12	0	1	12	82	1	9	2	100	64	95
Badulla	2	365	0	8	2	2	1	3	0	3	3	118	4	26	0	6	0	0	1	110	4	20	0	4	57	100
Monaragala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ratnapura	18	632	1	32	0	11	1	2	0	14	57	357	1	12	0	10	0	0	5	124	2	37	0	43	49	95
Kegalle	13	375	1	6	0	3	0	1	1	12	6	75	0	17	0	5	0	0	6	118	0	11	0	9	57	100
Kalmune	2	829	0	25	0	2	0	0	0	1	1	7	0	2	0	2	0	0	17	221	4	19	0	0	73	100
SRILANKA	**137**	**19126**	**13**	**293**	**0**	**50**	**4**	**64**	**12**	**208**	**12**	**1559**	**17**	**686**	**1**	**59**	**0**	**7**	**85**	**2475**	**15**	**270**	**19**	**944**	**55**	**88**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 01st May, 2020 Total number of reporting units 356 Number of reporting units data provided for the current week: 268 **C****=Completeness

A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP   25ᵗʰ– 01ˢᵗ May 2020 (18ᵗʰ Week)

Disease	No. of Cases by Province									Number of cases during current week in 2020	Number of cases during same week in 2019	Total number of cases to date in 2020	Total number of cases to date in 2019	Difference between the number of cases to date in 2020 & 2019
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	09	32	- 71.8 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	00	02	02	00	01	00	01	06	08	62	135	- 54 %
Measles	00	00	00	00	00	00	00	00	00	00	07	26	81	- 67.9 %
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	03	04	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	06	08	- 14 %
Whooping Cough	00	00	00	01	00	00	00	00	00	01	01	04	27	- 85.1 %
Tuberculosis	00	00	00	00	00	00	00	00	00	00	150	1455	2835	- 48.6 %

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

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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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