

Public Health Responses and Challenges to Covid-19: A Study of Institutions in the Regional Director of Health Services (RDHS), Kalmunai, Sri Lanka

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Abstract

The Covid-19 pandemic is the greatest challenge and the global health calamity that the humankind has ever faced since the 2nd World War. Although it originated from Wuhan in China, it brought the entire world into a standstill with unprecedented impacts on human lives and economy of the world. Despite the fact that Sri Lanka is a developing country, it has responded to the Covid-19 significantly well in its first wave compared to other South Asian and European Countries that equipped with a strong public health mechanism, having formed the Presidential Task Force on Covid-19 consisting of health authorities, armed forces and other institutions. However, the second wave of Covid-19 poses numerous challenges to the health authorities to contain the transmission of Covid-19. Although there have been studies on Covid-19 in Sri Lanka, the responses of institutions to the Covid-19 have not yet been properly documented or remain unaddressed. As such, this study explores the responses of Kalmunai Regional Director of Health Services (RDHS) and other institutions in controlling the Covid-19 and the challenges confronting them in the Kalmunai RDHS region. In addition to secondary sources, the data for this study were drawn from qualitative research method in the Kalmunai RDHS area. The study reveals that the local government authorities, Divisional Secretariats, law enforcement authorities, religious institutions, sports clubs and other civil society organizations have extended their fullest support to Kalmunai RDHS and worked together in containing the Covid-19. However, Kalmunai RDHS has been encountering a numerous challenges: a) Lack of adequate staff, supply and space (SSS), b) Problem of contact tracing, c) Lack of community participation, d) Protection of Health Care Workers, e) Vulnerability of people, f) Unsure about the end of Covid-19, g) Staff resistance, h) Delay of Polymerase Chain Reaction (PCR) test results, and i) Lack of Personal Protective Equipment

(PPE), j) Non availability of dedicated Covid-19 treatment center within the Kalmunai RDHS region , k) Spread of misinformation and disinformation through social media and l) Management of wastes of Covid 19 affected patients. The study thus argues that the support and participation of people with the health authorities and other relevant institutions is significantly critical to control the Covid-19 pandemic until a credible vaccine for Covid-19 is found and rolled out to the people.

Keywords: contact tracing, local government authorities, law enforcement authorities, protection of health care workers, lack of community participation

1. Introduction

The COVID-19 pandemic is the greatest challenge and the global health calamity that the humankind has ever faced since the 2nd World War. Although it originated from Wuhan in China, it brought the entire world into a standstill with its impacts on human lives and economy of the world. Compared to other diseases and their respective burdens, Covid-19 has caused much impact and greater human suffering in the world (Moon, 2020). As a pandemic, Covid-19 has hit almost every country on earth. Policymakers and public managers worldwide have been put to the test on their crisis management capability (Singh & Singh, 2020). From January 2020 onwards, divergent emergency management approaches have been adopted worldwide. Yet, it has become increasingly controversial as to what policy instruments are more effective, in both the short and the long run and whether instruments that work in one region can be used in others (Normile, 2020).

The critical role of institutional infrastructure and cultural compatibility in the fight against Covid-19 is evident in five advanced economies in East Asia which are Taiwan, Hong Kong, South Korea, Singapore and Japan. They have taken aggressive actions from the beginning of the Covid-19 pandemic and relatively successful in containing the spread of the virus (Wang, et al, 2020). Similarly, Hong Kong, Singapore, and Taiwan all experienced difficulties in isolating and escorting patients with suspected, particularly at the point of admission and thereafter. At the same time, Singapore has regularly sent official messages to the public that encourage washing hands and sneezing into elbows or tissue papers during the flu season (An & Tang, 2020). Likewise, citizens in Hong Kong and Korea are routinely asked to wear masks, wash hands, and take other precautionary actions such as avoiding crowded places and gatherings (Griffiths, 2020). In Korea, real-time precautionary alarms are sent to citizens through mobile texts several times a day during a public health emergency. However, policy instruments that work in containing the Covid-19 in East Asia may not work well in other countries (An & Tang, 2020).

Although Sri Lanka is not as affected as other South Asian countries by the Covid-19 pandemic, consequences of its effect in the second wave, compared to first wave, have been deleterious. The first outbreak of the Covid-19 in Sri Lanka was detected with a Chinese tourist on 27th January 2020, and the infected local person was identified on 11th March 2020 (Erandi, Mahasinghe, Perera, & Jayasinghe, 2020; Rameez, Fowsar & Lumna, 2020). Subsequently, this forced the government of Sri Lanka to tactically enforce public health surveillance measures to control the spread of Covid-19. The number of victims then gradually increased. However, as of 30th September 2020, the number of cases was just 3374, although Sri Lanka has a population of about 21 million. Of these, 3230 have recovered, and 13 have died. Most of the cases were identified from Sri Lankan migrants (Worldometers, 2020).

During the first wave of Covid-19 pandemic, the government of Sri Lanka immediately took concrete steps to contain the Covid-19 pandemic by imposing curfews or lockdowns as necessary across the country to isolate the Covid-19 affected areas. President Gotabaya Rajapakse formed a National

Operations Centre to curb the spread of Covid-19 (Centre for policy alternatives, 2020). The task force was comprised of health experts, military personnel, key stakeholders, doctors, health workers and other government officials under the Army Commander Major General Shavendra Silva as the chairman (CPA, 2019).

The National Operations Centre implemented various measures, including setting up of quarantine centres in various parts of the country assisted by the tri-forces. People diagnosed with Covid-19 were sent to quarantine centres (Ceylon Today, 2020). Along with health workers, the task force mobilized the military and intelligence service personnel to trace the contacts of Covid-19 victims. Meanwhile, the government sought the support of the people across the country to strictly enforce the health protocols like wearing masks, maintaining social distancing and health hygiene all the times. Tourists and migrants arriving to Sri Lanka were subjected to Covid-19 testing and fourteen days (14 days) of compulsory isolation in quarantine centres. These punitive measures taken by the Government of Sri Lanka headed by the current President Gotabaya Rajapaksa to deal with Covid-19 were lauded not only by Sri Lankan citizens but also by many foreign countries and international organizations (TRT World, 2020). Thus, Sri Lanka has been recognized as the second most successful country in the world at combating the Covid-19 pandemic with low mortality and morbidity rates (MENAFN, 2020). It is to be noted, however, that this success of the government could be characterized during the first wave of Covid-19 as this is largely contested in the second wave of Covid-19.

During the second wave of Covid-19, a spike in Covid-19 cases was reported in Minuwangoda, the cluster of which was associated with the Brandix Garment Factory while another cluster in Peliyagoda was associated with the fish market. Of the total number of cases, 6,115 cases were reported from the Peliyagoda-Minuwangoda cluster (Fernandopulle, 2020). Moreover, there are 144 mortalities and more than 30,072 cases of Covid-19 in the country as of 10th December, 2020 (Worldometer, 2020). Tough measures taken by President Rajapaksa, such as a nearly three-month lockdown from March 20 to May 11, kept the number of Covid-19 affected persons at less than 3,500, after which life of the people returned almost to normal. Unfortunately, the current second wave of Covid-19 is rapidly rising day by day and the original sources of the Covid-19 in these two clusters are still unknown. Nevertheless, the high number of Covid-19 cases reported daily at present does not portend well for the health authorities and the government as they have to face a lot of challenges to contain the Covid-19 in times to come.

Kalmunai Regional Director of Health Services (RDHS) located along the eastern coastal belt of Sri Lanka oversees the regional health consideration covering an area of 1,250.47 square kilometres from Periyaneelavanai to Ullai (Pottuvil) to serve the population of about 475,796. Thus, Kalmunai RDHS, the primary health care institution in the region, is now in the forefront of combating Covid-19 with the support other state and non-state institutions. Despite being supported by other institutions, Kalmunai RDHS has been facing numerous challenges to contain the Covid-19. Although there have been studies on Covid-19 in Sri Lanka, the responses of various institutions to Covid-19 have not yet been properly documented or remain unaddressed. Therefore, this study explores the responses of Kalmunai Regional Director of Health Services (RDHS) and other institutions in controlling the Covid-19 and the challenges confronting them in the Kalmunai RDHS area.

2. Literature review

It is prominent to construct the review of the relevant literatures which are related to this study. An, B. Y., & Tang, S. (2020) have undertaken a study on the title of 'Lessons from Covid-19 Responses in East Asia: Institutional Infrastructure and Enduring Policy Instruments'. The researchers focused on such

factors as competent leadership, policy instruments or cultural dispositions which are existing on government commentaries. This article aimed at filling the gap in the debate by comparing Covid-19 responses among five advanced economies in East Asia, namely Taiwan, Hong Kong, South Korea, Singapore and Japan. Finally, the paper revealed that comparison across the five advanced economies in East Asia yields several implications for comparative research and policy. Nevertheless this study is focused on the lessons from Covid-29 responses in the East Asian background and does not concentrate on the Sri Lankan context at all.

Karunathilake, K. (2020). has carried out a research on the topic of 'Positive and negative impacts of Covid-19, an analysis with special reference to challenges on the supply chain in South Asian countries'. This article was aimed at analysing the positive and negative impacts of Covid-19 in a sociological perspective. It is further focused on possible challenges to the supply chain in South Asia. Also, the article has a proposal for the control of the disease as well as the entire socio-economic, environmental and political atmosphere in a country, whilst particularly giving more weight to South Asia. The proposed actions are analysed in short-term, mid-term and long-term basis, and any experts and social workers involved in the pandemic controlling process can gain an insight into what to do and how to perform their tasks. The article emphasises the importance of a sociological analysis in a pandemic situation. Thus, it is mainly based on the impacts of Covid-19 especially in the South Asia as a whole, but does not necessarily focus on public health responses of institutions towards Covid-19 in Sri Lankan context.

Verma, A. K., & Prakash, S. (2020) have done a paper on 'Impact of Covid-19 on Environment and Society'. The article deals with the multiple positive effects of lockdown on environment and society including biodiversity. Through the study, researcher pointed out that in spite of all the efforts to restore the nature during the last few decades, humans could only move a few steps forward not up to the commendable extent. But during the last few months, consequences of the Covid-19 pandemic have successfully recovered the environment to a large extent that should definitely set positive impact on global climate change. In this way, the authors have helped to change the behaviour of humans and the surrounding ecological system. Anyhow, this study has basically focused on the environmental impact as a result of Covid-19, and does not necessarily focus on the responses or interventions by the institutions on the Covid-19.

Another study undertaken by Singh, J., & Singh, J. (2020) entitled on 'Covid-19 and its impact on society', has basically tried to analyse the impact of the Covid-19 in the life of the individual as a whole, but failed to concentrate on the social institutions and their enormous responses to Covid-19. This is a reviewed paper based on secondary information drawn from various sources such as published and unpublished journal articles, magazines and report government organizations. As such, many studies have been conducted on the Covid-19 and its positive and negative impacts on the society, environment, media, human health and so on and the lessons from Covid-19 responses. In Sri Lanka, although there were many researches undertaken on various dimensions of Covid-19 pandemic, many of them were not related with the institutional responses to the Covid-19. Therefore, this study has been undertaken by the researchers to fill this gap to explore the responses of Kalmunai Regional Director of Health Service and other state and non-state institutions in controlling the Covid-19 in RDHS area.

3. Methodology

This particular study is undertaken in Kalmunai RDHS area out of the total 26 RDHS available across Sri Lanka. There are 25 administrative districts in Sri Lanka, each district has their own RDHS office except

Ampara district, which has got two separate administrative RDHS divisions, namely Ampara RDHS & Kalmunai RDHS.

As this is a qualitative study, the data have been collected from primary as well as secondary sources. Primary data have been collected mainly from 20 informal interviews with the people representing various sectors and professions, 03 focus group discussions and observations in the Kalmunai RDHS region. Secondary data obtained from various sources such as published journal, articles, books and reports of various government organizations. The collected data were analysed by the descriptive method.

4. Results and discussion

This section of the paper fundamentally sheds light on the role of institutions like Kalmunai RDHS and other institutions in combating Covid-19. This will be followed by the discussion on the challenges confronting such institutions in doing the same.

4.1 Kalmunai Regional Director of Health Services (RDHS) and its role on Covid-19

The RDHS located in Kalmunai in the Eastern coastal belt of Sri Lanka is mandated to oversee the regional health consideration covering the area of 1,250.47 square kilometres from Periyaneelvanai to Ullai (Pottuvil) to serve the health and welfare needs of 475,796 people (RDHS, 2020). The Kalmunai RDHS area is further divided into 13 Medical Officer of Health (MOH) areas namely: Kalmunai North, Kalmunai South, Sainthamaruthu, Karaitivu, Nintavur, Addalaichenai, Akkaraipattu, Alayadivembu, Thirukkivil, Pottuvil, Navithanveli, Sammanthurai and Irakkamam. Each area of medical officer of health is led by Medical Officer of Health (MOH).

The Regional Director of Health Service is responsible for all administrative matters pertaining to the preventive and curative health in the area. To accomplish this task, the RDHS is supported by a Deputy Director, the Medical Officer (Planning), District Regional Epidemiologist, Medical Officer (Maternal & Child Health), Medical Officer (Non Communicable Diseases), District Chest Clinic Medical Officer, Regional Anti-Malarial Medical officer, District Medical Officer for Sexually Transmitted Diseases, District Health Care Quality and Safety Medical Officer, the District Mental Health Medical Officer, an Accountant, an Administrative officer and an Entomologist.

Within this regional level framework, the Medical Officers of Health in each MOH area is responsible for all public health related activities. Under the guidance of the Medical Officer of Health, the public health officials such as Supervising Public Health Inspector (SPHI), Public Health Nursing Sisters (PHNS), Public Health Inspectors (PHI), Public Health Midwives (PHM) and Health Assistants have collaboratively worked to improve the health of the people in the relevant MOH areas. Collectively, the public health staff provides immeasurable services in the Region to prevent and control communicable and non-communicable diseases.

In the Kalmunai RDHS region, there are seven base hospitals such as Base Hospital Kalmunai North, Ashraff Memorial Hospital, Base Hospital Akkaraipattu, Base Hospital Sammanthurai, Base Hospital Pottuvil, Base Hospital Nintavur, and Base Hospital Thirukkivil. Of which, three base hospitals such as Base Hospital Kalmunai North, Ashraff Memorial Hospital and Base Hospital Akkaraipattu are under the line ministry administration, while rest of the hospitals are under the RDHS Kalmunai.

Further, there are thirteen Divisional Hospitals (DH) namely Maruthamunai DH, Sainthamaruthu DH, Karaitivu DH, Oluvil DH, Palamunai DH, Addalaichenai DH, Deegawapiya DH, Akkaraipattu DH, Panankadu DH, Central Camp DH, Irakkamam DH, Malwatta DH and Annamalai DH and also nine Primary Medical Care Units (PMCU), such as Periyaneelavanai PMCU, Chenaikudiyiruppu PMCU,

Mavadippalli PMCU, Alankulam PMCU, Muhammadiyapuram PMCU, Komari PMCU, Ullai PMCU, Sorikkalmunai PMCU and Sennalkiramam PMCU which are located in the Kalmunai RDHS area to provide health care services.

Moreover, the public health staff coming under the purview of Kalmunai RDHS are in the forefront of combating Covid-19 with the support of other institutions as Covid-19 is considered as one of the deadliest viruses that the humankind has ever witnessed in the history. While mobilizing all the resources at its disposal, the RDHS Kalmunai has been able to reach out to the communities around the area through civil society organizations and other institutions to combat the Covid-19.

Kalmunai RDHS commenced its efforts to combat Covid-19 in the region during the first wave of Covid-19 from March to September. It held number of meetings and deliberations with many civil society organizations and other institutions during the first wave of Covid-19 and took much trouble to defeat or confront Covid-19 during this period. As a result, Kalmunai RDHS has witnessed only two (2) positive Covid-19 cases within the region and the affected patients were sent to Covid-19 treatment centres and duly treated at the end. One of the government servants stated: *“You know that only 2 Covid-19 cases found in Akkaraipattu MOH area and they were sent to Covid-19 hospital for treatment and duly treated there. People were very much panicked and worried in the eastern coastal area as a result of that, but nothing untoward happened thereafter. There was no report on community transmission at that time. The area where the Covid-19 suspects were found was locked down and their family members observed self-quarantine”.* (Interview-01)

The above excerpt clearly underlines that only 2 Covid-19 cases were found during the first wave and there was no serious concern on community transmission at that time. However, the cases of Covid-19 in the Kalmunai RDHS area have rapidly been rising daily from September onwards till now, which has been described as the second wave of Covid-19. The following table shows the statistics on Covid-19 cases during the second wave till 4th December, 2020 in Kalmunai RDHS area.

Table: 1.1 Covid-19 situation in Kalmunai RDHS on 04.12.2020

| Kalmunai RDHS Region (MOH Areas) | | Currently Home Quarantined (No of people) | | Polymerase Chain Reaction (PCR) & Rapid Antigen Test/ Diagnosis | | | | Dis- charged | Active cases |
|--|----------------|--|-------|--|-------|----------------|-------|-----------------|-----------------|
| | | Yester day | Total | PCR & Antigen Test | | Positive cases | | | |
| | | | | Yester day | Total | Yester day | Total | | |
| 1 | Kalmunai (N) | 5 | 79 | 0 | 165 | 0 | 0 | 0 | 0 |
| 2 | Kalmunai (S) | 17 | 119 | 100 | 339 | 1 | 6 | 5 | 1 |
| 3 | Sainthamaruthu | 6 | 225 | 25 | 244 | 0 | 7 | 1 | 6 |
| 4 | Karaitivu | 8 | 171 | 50 | 212 | 0 | 1 | 0 | 1 |
| 5 | Nintavur | 0 | 111 | 1 | 171 | 0 | 21 | 0 | 1 |
| 6 | Addalaichenai | Isolated | | 100 | 538 | 13 | 123 | 0 | 21 |
| 7 | Akkaraipattu | | | 298 | 2292 | 12 | 6 | 3 | 120 |
| 8 | Alayadivembu | | | 105 | 578 | 3 | 8 | 0 | 6 |
| 9 | Thirukkivil | 18 | 92 | 45 | 327 | 3 | 7 | 1 | 7 |
| 10 | Pottuvil | 11 | 91 | 50 | 365 | 0 | 0 | 7 | 0 |
| 11 | Sammanthurai | 3 | 126 | 36 | 241 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|-------|--------------|----|------|-----|------|----|-----|----|-----|
| 12 | Irakkamam | 16 | 89 | 20 | 204 | 0 | 11 | 6 | 5 |
| 13 | Navithanvely | 0 | 135 | 0 | 111 | 0 | 2 | 0 | 2 |
| Total | | 84 | 1238 | 830 | 5787 | 32 | 193 | 23 | 170 |

(Source: Kalmunai RDHS Regional report, 2020)

The above table 1.1 clearly displays the conditions of the prevailing situation of Covid-19 in the Kalmunai RDHS. It can be seen that most number of Covid-19 positive cases are found in Addalaichenai, Akkaraipattu and Alayadivembu areas in Kalmunai RDHS region. Furthermore, in the first wave of Covid-19 only 2 people were affected and in the second wave there were 193 people affected by the Covid-19. To date, there are 195 positive cases, of which 170 are total active cases in the Kalmunai RDHS region(Kalmunai RDHS Regional report, 2020)

Against this backdrop, after the second wave of Covid-19, the public health responses by various institutions along with Kalmunai RDHS to Covid-19 in the region are commendable; prompt actions taken by local government authorities, divisional secretariats, law enforcement authorities, religious institutions and its leaders and sports clubs and other civil society organizations to combat Covid-19 are highly praiseworthy. They began to work with people to address the Covid-19 pandemic and are working together with RDHS. Thus, the responses of these institutions can be discussed as follows,

4.2 Local government authorities

Local Government bodies like Kalmunai Municipal Council, Nintavur Pradhesiya Sabha, Addalaichenai Pradhesiya Sabha, Akkaraipattu Municipal Council, Akkaraipattu Pradhesiya Sabha, Alayadivempu Pradhesiya Sabha, Thirukkivil Pradhesiya Sabha, and Pottuvil Pradhesiya Sabha are coming under the purview of Kalmunai RDHS. In addition, there are 13 areas of Medical Officer of Health (MOH) coming under the purview of Kalmunai RDHS region, namely Kalmunai (North), Kalmunai (South), Sainthamaruthu, Karithivu, Nintavur, Addalaichenai, Akkaraipattu, Alayadivembu, Thirukkivil, Pottuvil, Sammanthurai, Irakkamam and Navithavvely.

These local government authorities have extended their fullest support with RDHS and MOH of their respective areas for data collection, awareness programmes on Covid-19 healthcare protocols and enforcing lockdown in certain areas deemed as high risk areas for Covid-19. Since, there are greater number of cases of Covid-19 reported daily in Kalmunai RDHS region, it has been a bounden duty upon these local government authorities to work in coordination with RDHS and MOHs to curb the transmission of Covid-19. During this pandemic, every local authority in Kalmunai RDHS region responded to rapidly look into the needs of people and isolated families, i.e., food, health. They created local mobile delivery chains after getting approval from relevant MOH's to deliver essential food to the area where lockdown or isolation is imposed. Moreover, they have also done awareness campaigns on Covid-19 health protocols such as wearing face masks, social distancing, sanitization, and hand washing. A farmer said: *"In this second wave of Covid-19, the local government authorities with the support of RDHS Kalmunai helped the farmers in various ways. They allowed us to go to the paddy field and involve in our livelihood without any interruptions."* (Interview-02)

So, local government authorities helped continue farming and thus to sustain the livelihood of people during lockdown. A person said: *"Local government bodies are often responsible for critical aspects of Covid-19 containment measures, health care, social services and local economic development. Many municipalities were under pressure to provide assistance to at-risk groups, including a large share of the elderly population"*. (Interview-03)

One woman stated: *"In the early days of its spread of Covid-19 in our area, there was inadequate knowledge and awareness about the virus as there was less number of cases. Then in the second wave of the Covid-19, public officials from Pradbesiya Sabha and MOHs came there and briefed us on the importance of adhering to health guidelines like wearing face mask, sanitation, hand washing and social distancing".* (Interview-06)

Therefore, it is abundantly clear that the local government bodies coming under the purview of Kalmunai RDHS appear to have effectively worked in collaboration with RDHS and MOHs in respective areas to curb the Covid-19.

4.3 Divisional Secretariats(DS)

The Divisional Secretariats in the coastal belt of Ampara District like Kalmunai Muslim DS division, Kalmunai Tamil DS division, Sainthamaruthu DS division, Ninthavur DS division, Addalaichenai DS division, Akkaraipattu DS division, Alayadivempu DS division, Thirukkivil DS division, Pottuvil DS division coming under the purview of Kalmunai RDHS have extended their support to RDHS and MOH in the respective areas in terms of food distribution to families in self-quarantine and data collection and other services. Grama Niladhari officers and Social Development Officers from DS offices have also worked together with PHIs and MOHs in terms of the contact tracing of Covid-19 patients and food distribution to people in isolated houses/areas.

Since Covid-19 is an unprecedented public health emergency, the role of divisional secretariats within Kalmunai RDHS region was significant. They enhanced the disease surveillance and public health interventions, helped the private sector and designed and implemented rapid responses to the Covid-19 pandemic. For all of these, Divisional Secretariats have worked together with RDHS and MOH in a flexible manner. A person quoted: *"You see, people from DS offices gave food to those who were in quarantine and isolated. Similarly, the Grama Niladharis worked together with PHIs to trace contact of Covid-19 and distribute food to those isolated. Therefore, their support is ever memorable"* (Interview-16).

Thus, it is clear that the DS offices in Kalmunai RDHS region have worked together with RDHS and MOHs to address not only the needs of the people, but to trace contact of Covid-19 patients and gather data collection and so on. This has contributed to the smooth functioning of Kalmunai RDHS and MOHs in combating Covid-19 successfully.

4.4 Law enforcement authorities

During the Covid-19 pandemic, army, police and intelligence forces have rendered their enormous services and support to RDHS and MOH of their respective areas to do the contact tracing of first and second contact persons of Covid-19 patients. They also helped to enforce lockdown in high risk areas of Covid-19 in Kalmunai RDHS region.

A MOH officer of the Kalmunai RDHS said: *"During the outbreak of Covid-19 in the Kalmunai RDHS area in March 2020, the first thing police did was to enforce the lock down and also the intelligence forces helped us to trace contacts of Covid-19 patients. The Army has also done patrolling in the areas. All of these things helped us to enforce Covid-19 protocol among the people".* (Focus group discussion-01)

Thus, the contribution of law enforcement authorities for contact tracing, enforcing lockdown, strictly ensuring that people to adhere to health protocols and working closely with RDHS Kalmunai and MOHs is absolutely remarkable. An officer of the Kalmunai RDHS region mentioned: *"While police and army personals helped us to enforce lockdown in certain risk areas of Covid-19. Intelligent forces helped us to trace contact first and second contacts of Covid-19 patients".* (Focus group discussion-02)

It is evident from above discussion that the active participation of law enforcement authorities became essential in containing Covid-19 in Kalmunai RDHS region.

4.5 Religious institutions and its leaders

Religious institutions and their leaders like Buddhist clergies, Hindu Priests, Ulema (Mowlavis), Christian Fathers, administrators of religious institutions like board members and trustees have worked in coordination with RDHS and MOH of their respective areas to do micro-marketing or awareness programme in terms of adhering to health protocols by people such as wearing mask, hand washing, social distancing, and sanitization in the respective areas. They also requested the people to comply to the lockdown rules and regulations, instructed the people to help the MOH to take PCR and Antigen test, and advised them to conduct the prayers in their residences. More importantly, some religious institutions have also supported those who were in need of financial assistance during this difficult time. An elderly man mentioned: *"Public health authorities and religious leaders were actively working together on the effective responses to the pandemic. As the need to enforce physical distancing became central to public health, adapting or limiting religious gatherings emerged as an obvious one. It also became apparent that religious leaders and faith groups had distinctive insights to share and practical roles to play. Religion as well as religious leaders got involved in supporting to save human lives. Through the announcement in the religious institutions, they gave the health instructions to the people in their respective areas"*. (Interview-05)

As such, the religious leaders in Kalmunai RDHS area extended their fullest support to MOH in their respective areas to combat Covid-19.

4.6: Sports clubs and civil society organizations

The sports and civil society organizations have extended their enormous support and corporation to the health authorities and voluntarily worked with RDHS and MOH of their respective areas to do awareness programme on Covid-19, to distribute raw food and cooked food items, to arrange transportation for patients to hospitals and assist the task of contact tracing on the primary and secondary contacts of Covid-19 victims or patients. An old man said: *"I got the knowledge about the safety measures from our area sports clubs and through the announcements they did through awareness programme on Covid-19. It helped us a lot"*. (Interview-18)

The secretary of a Sports Club in Kalmunai stated: *"In our sports club, there are many youths who responded whenever it required our services in this second wave of pandemic. The first thing we did was to give some instructions for the people around us and how to protect themselves from Covid-19. As a secretary of the club, I am proud of the decision we took to support the MOH in our area, to contain Covid-19"* (Interview-14)

From above perspectives, sports clubs in the area have done much awareness programmes on Covid-19 for the people in the Kalmunai RDHS region. Moreover, as civil society organizations were aware of ways in which the transmission of Covid-19 could be curbed, they would advise people to frequently adhere to health protocols such as hand washing, applying sanitation using an alcohol based- rub, maintaining social distancing norms and using of mask if one were to go out of his or her house on an urgent work.

An officer of the Kalmunai RDHS said: *"Social groups like societies or organizations asked people to do testing, adopt health protocols like hand washing, wearing masks, social distancing and limit mass gathering of outgoing. So, their support is tremendous"*. (Focus group discussion-02)

It can be understood that civil society organizations have done a tremendous job by working together with MOHs to contain Covid-19.

5. Challenges confronting the Kalmunai RDHS and other institutions

Since, the Covid-19 has been spreading fast throughout the Kalmunai RDHS region, the authorities take so many safety measures to combat the spread. However, the authorities themselves face numerous challenges as discussed below.

5.1: *Lack of staff, supply and space (SSS)*

In Kalmunai RDHS region, the main challenge confronting the authorities is the lack of adequate staff, supply and space. Although there are many vacancies that exist in the MOH offices and RDHS, they have not been filled yet. As this Covid-19 pandemic is a health emergency, most of the Sri Lankan health institutions are not adequately prepared to face such emergency situations. To confront any human tragedy or emergency situation, it is essential to have adequate number of health and human resources. However, the supply of the urgent health care items or necessities has ceased to come by in this tragic pandemic. As a result of the Covid-19 pandemic bringing the economy and transport system in the country to a halt, the supply chain has highly interrupted. Moreover, the lack of space in the RDHS, hospitals and as well in the MOHs is a huge challenge for everyone in this situation. Finding place for Covid-19 treatment centre is also a significant challenge for health administrators, since all curative institutions are needed a separate space to isolate and manage suspected or infected patients. Many curative centres were not designed or built to respond to such a disaster of communicable diseases. Because of this space issue, the social distancing also cannot be maintained properly in the offices or institutions. An officer at Kalmunai RDHS states: *"We are facing a burden due to lack of adequate staff in our area. Although we have 1382 cadres in Kalmunai RDHS, only 1049 cadres have till now been filled, meaning we have another 333 vacancies to be filled. So it leads to a shortage of staff and essential health workers. Similarly, supply chain of health equipment is very slow and moreover, space in the hospitals and MOHs is very limited and narrow"*. (Interview-03)

A religious leader of the Muslim Society (Mowlavi) said: *"This is an unfortunate situation for all of us. Anyway, the hospitals and its set up, and the space of the hospitals are not adequate to combat with current pandemic."* (Interview-04)

A younger man quoted: *"During this second wave of pandemic my brother was affected by the Covid-19 and we immediately took him to the hospital. But the thing I observe was, there was a shortage of the medical staff and most of the time they were helpless with their situation and it was devastating for me to see that situation and I feared about my brother's health, because of the shortage of the staff"*. (Interview-13)

As above mentioned, it is clear the Kalmunai RDHS needs more medical and non-medical facilities to effectively attend to the needs of Covid-19 pandemic at present and the medical officers are facing challenges in this regard. As it is an emergency pandemic, no one knows how far this will affect the people and society in this way.

5.2: *Problem of contact tracing*

Contact tracing is the key to slow down the spread of Covid-19 by detection & isolation (Centre for Disease and Control, 2020). In Sri Lanka, both backward and forward contact tracings are done through the public health front line staff and with the support of intelligence service. Backward contact tracing is to identify the origin of the spread and the forward contact tracing to isolate or quarantine the affected people.

People are not only highly concerned and alarmed about the PCR and Rapid Antigen testing, but about self-isolation (quarantining). Stigmatization by people towards Covid-19 patients and those who have

associated or remained in contact with Covid-19 patients is also another concern that people are confronted with. This leads to many challenges to authorities to contain Covid-19 in the Kalmunai RDHS region. A government officer said: *"You know that tracing suspected individuals are very difficult to do. Because, people are not coming forward because of Covid-19 phobia. Also, stigmatization by people on Covid-19 patients is also another reason. People are fearful about the PCR testing and the challenges associated with if they are identified as positive in the Covid-19. Apart from that, Muslims in the society are reluctant to come forward because they fear that their dead bodies will be cremated if they were to die by Covid-19. So, people are not supportive to contact tracing and it's a biggest challenge for us"*. (Focus group discussion-02)

The above excerpt clearly underlines the fear of PCR (PCR phobia) or Rapid Antigen Testing, stigmatization by people upon the Covid-19 patients and their associates, and the fear of forced cremation of Muslim dead bodies. These are the key challenges confronting health care officials in the MOHs and Kalmunai RDHS to contain Covid-19 in the region and cause a crippling effect on health care officials in the area to do the contact tracing of Covid-19 patients effectively too.

5.3: Lack of community participation

Although, most of the people in the Kalmunai RDHS area do follow the health protocol, some people do not adhere to the Covid-19 health protocol. Thus, they are not supportive to the health guidelines such as not wearing masks, health hygiene, social distancing and so on as instructed by the health officers. It poses a significant challenge for the health care authorities and workers in the Kalmunai region. An officer of the MOH stated: *"Some people don't comply with health protocol such as wearing masks, social distancing, hand washing, don't even adhere to lockdown rules and violate the rules. Moreover, some are not ready to reveal their colleagues on the suspected cases and don't reveal the names of those who came from Covid-19 high risk areas like Colombo or outside areas. So, the attitude of people is worse in this situation as they don't follow the safety measures sufficiently"*. (Focus group discussion-01)

A University student said: *"In my view, some teenagers don't follow the safety measures properly and that is not a healthy thing for them as well for the society in the light of severe spread of Covid-19 pandemic and, some of them don't even wear the mask "*. (Interview-11). As mentioned above, lack of community participation or support in the Kalmunai RDHS area in terms of adhering to the Covid-19 protocol has become a major challenge to the healthcare workers serving in MOH and Kalmunai RDHS to mitigate the Covid-19.

Most importantly, when the people are affected by the Covid-19 positive, they are duly treated at Covid-19 hospitals and asked to be in self-quarantine for 14 days at their residences when they are brought back from hospitals. On the other hand, the people returned back from the Colombo or some other parts of the country or from abroad are requested to go for self-quarantine. These safety measures are taken to safeguard the Covid-19 affected patients and their associates. However, these safety measures are taken lightly and people tend to violate all the health protocols. Therefore, it can be noted that not only are the people reckless, but their support is also minimal in terms of adhering to health protocols and self-quarantining during this pandemic.

5.4: People with vulnerability

Covid-19 pandemic affects all segments of the population and is particularly detrimental to members of social groups in the most vulnerable situations and continues to affect populations including people with uncontrolled non communicable diseases, people with low immunity, people living in poverty, elderly, persons with disabilities, youth, pregnant mothers and indigenous peoples. Therefore, this situation is problematic for the health authorities to handle. An officer of the Kalmunai RDHS articulated: *"Even at the best of times, persons with disabilities face challenges in accessing health care services, due to lack of availability,*

accessibility, affordability, as well as stigma and discrimination. So, their problems increased tremendously in this Covid-19. Also, the people who take care of the disable people may not be able to practice social distancing or cannot isolate themselves as thoroughly as other people, because they require regular help and support from other people for every day self-care tasks. So, it is a major barrier to make them to follow the health guidelines". (Focus group discussion-02)

The excerpt of the above interview suggests that taking care of people with vulnerability during this challenging time of Covid-19 is absolutely difficult. Therefore, it has caused numerous challenges to the healthcare officials in the hospitals, MOH and RDHS not only to attend to the health needs of vulnerable people in this difficult time but to address their legitimate concerns like food and psychological needs of those people in this challenging time.

5. 5: Protection of health care workers

Since the support of health care workers is essential at this critical situation, it is extremely important to protect them. Unfortunately, protecting them is also an incredibly challenging task at this situation. As they have not undergone such experience and hassle before, it is really difficult to protect the workers. A MOH officer stated: *"Sometimes the health care workers who take throat swabs from people for PCR or Rapid Antigen Test receive calls and continue to talk over the phone by removing their safety dresses and thus they are exposed to Covid-19. So, protecting health care workers is a major challenge at this critical juncture for us".* (Focus group discussion-01)

As can be seen that protecting the front line care health workers in this pandemic is very difficult task during second wave of pandemic. It is true that the services of health care workers are extremely significant during this pandemic, however, it does not necessarily mean that their health and well-beings should be compromised. Therefore, it is predominantly significant to protect them.

5. 6: Unsure of the end Covid-19

A biggest challenge is no one knows exactly when this pandemic will end. The report from World Health Organization also suggests that we may have to live with Covid-19 for some more years and thus need to adjust our lives amidst Covid-19. However, it always creates the panic situation and keep the people on alert all the times. A young woman quoted: *"I got married after the first wave of Covid-19 and until now, we live with a fear and this life really makes us sad and we feel very bad with current situation. The worst part of this pandemic is we don't know when this situation will get back".* (Interview-19)

A woman from Akkaraipattu said: *"My husband is in a foreign country for five years and he was about to come. But, unfortunately he couldn't come because of this situation. Our family also is anxiously waiting with hope that he will come when the Airport is opened. However, it is not happening at present. Sometime I lose my hope because I don't know when this situation will get back normal".* (Interview-15)

An officer of the MOH said: *"Nobody knows when Covid-19 would end, until or unless a credible vaccine is found and tested. So, we have to live with Covid-19 for some years in the midst of Covid-19. Even if all the people were vaccinated of Covid-19 prevention jabs, nobody is sure that it would not resurface again. So, the situation is dire".* (Focus group discussion-01)

It is evident now that the people in the region as well as authorities are apprehensive of Covid-19 as they are not sure when the pandemic would come to end. People are also not sure when the immunization of Covid-19 with credible vaccines will be carried out in a mass scale in the country.

5.7: Staff resistance

As Covid-19 is contagious and deleterious, health care workers encounter a number of challenges to work at this pandemic. They are not only alarmed that they may be exposed to the Covid-19 by working with

the Covid-19 patients, but they are equally fearful about their family too. Since most of the health workers tend to get exposed to Covid-19, they are reluctant to serve during this period. This has forced them to report to work with frequent absenteeism, to exert influence on health authorities with political leaders, to show excuses with past medical records and records of elderly or pregnant members in the family and to work in a fraudulent and reckless manner so that he or she can be removed from their duties or transferred from there. A medical doctor stated: *"Honestly speaking, during this time I am facing difficulties to give medical treatment to the people and, I am feeling about my family whole time, and I have little kids at my home and whenever I am get back to the home I fear about so many things whether this virus may affect them too at any situation"*. (Focus group discussion-03)

A very old woman quoted: *"My son is a doctor in Kalmunai hospital and whenever he came back home I feel very sad about him and at the same time we are fearful that our little children may get affected by Covid-19 by him. This is a worst experience ever for us"*. (Interview-07)

There is no doubt that health care staff are rendering their dedicated service to the nation at this pandemic and their service needs to be lauded. Nonetheless, it is a major challenge for the health authorities to sustain the services of some health care staff as they show resistance and reluctance to serve during this pandemic. The apprehension of health and well-beings of their family members and the consequent negative reaction they draw from the family members prompt some health care workers to skip the job or use undue influence to get them transferred to some other institutions during this pandemic.

5.8: Delay in getting PCR test results

Polymerase Chain Reaction (PCR) is a technique used in the lab to make millions of copies of a particular section of DNA. It was first developed in the 1980s. PCR is a common tool used in medical and biological research labs for processing DNA for sequencing and detecting the presence or absence of a gene to help identify pathogens during infection and when generating forensic DNA profiles from tiny samples of DNA (yourgenome,2020). The PCR machine is presently used across the world including Sri Lanka to identify the pathogen of Covid-19 in this pandemic. However, lack of required number of PCR machines to emergency is a major problem in many parts of Sri Lanka. The fact that only one PCR machine is available in the Batticaloa and all samples taken in Kalmunai RDHS region are sent to Batticaloa Teaching Hospital for PCR test underlines the delay in receiving test report. Similarly, some people do not believe in the Rapid Antigen tests, because they believe that this may result in false positive leading to the confusion of people. Therefore, the people prefer PCR test over Rapid Antigen test, but the lack of PCR machine in Kalmunai RDHS area causes challenges to the health authorities. A working woman said: *"My mother was suspected to have contracted with the Covid-19 in this second wave of pandemic and therefore she underwent for PCR test in order to make sure whether it is positive or negative. Anyhow, that was a major delay in getting that results and because of that my mother was quarantined for over one month and it is really an unfortunate and devastating situation for us"*. (Interview-08)

A health worker of the Kalmunai RDHS stated: *"Only one PCR machine is available to serve at this unprecedented proportion of crisis and it is available in Batticaloa Teaching Hospital. Because of the backlog, PCR test results get delayed. It is normally takes three to four days to get the report. As well, Antigen test is not trustworthy compared to PCR testing"*. (Focus group discussion-03)

It can be understood from the above perspectives that the lack of PCR machine in Kalmunai RDHS region causes enormous challenges not only to health care workers serving in MOH, hospitals, and Kalmunai RDHS, but to the people in the area as they are increasingly concerned about the Rapid Antigen Test.

5.9: Lack of Personal Protective Equipment (PPE)

One of the major challenges faced by the Kalmunai RDHS was the shortage of Personal Protective Equipment (PPE). The RDHS struggled to ensure enough medical masks, N-95 respirators, surgical gowns and other protective gear forcing many to suffer. It is tragic and regrettable that many public servants have been working under such awfully tragic conditions in the area. Similarly, lack of enough ventilators and ICU beds also causes a major challenge. As such, the patients with critical conditions find it hard to get ICU bed with ventilators since the existing beds in the hospitals remain fully occupied daily. So, the health care workers encounter huge challenges in terms of lack of adequate infrastructure to live up to the expectation of people affected by Covid-19. Meanwhile, still there are people who cannot afford to buy face masks and other safety equipment in order to safeguard themselves. This situation is discussed by the MOH officer: *"We have problems of lack of Personal Protective Equipment (PPE) like masks, body kits, gloves, boots and so on, though there is a huge demand. Thus, most of the people are using cloth made face masks and those are not that much safety for the people"*. (Focus group discussion-01)

A woman stated: *"In this critical situation, the only hope of ours is the doctors and the proper health facility. Unfortunately, here the infrastructure, in related with health measurements such as personal protective equipment, testing and diagnostics supplies and biomedical equipment such as ventilators are very few and it is a major problem for us"*. (Interview-17)

The above excerpts underline the lack of PPE kits and other necessary equipment like ventilators and ICU beds in the hospitals, MOH and Kalmunai RDHS to combat the Covid-19 effectively.

As mentioned earlier, it is abundantly clear that MOHs and hospitals under the Kalmunai RDHS are responsible for giving the adequate facilities of safety instruments for people affected by Covid-19 and their associates. Unfortunately, this has been a major challenge for health care workers in the Kalmunai RDHS region.

Moreover, there are some other challenges confronting the Kalmunai RDHS and other institutions in the region related to containing the Covid-19. For instance, non-availability of dedicated Covid-19 treatment centres within the Kalmunai RDHS region. There are only two such centres available in Kalmunai RDHS region at present and these centres located in Palamunai and Maruthamunai. These centres are not adequate enough to treat the rising number of Covid-19 patients. Many people were not supportive to the idea of establishing such centres in those centres in the first place. However, the mentality and attitude of people have dramatically changed over time and they silently approved it later. It is now functioning smoothly; however, the lack of space to cater to the rising number of Covid-19 patients has become a major challenge to Kalmunai RDHS. On the other hand, management of wastes of Covid-19 patients in the intermediate centres has also another challenge confronting the health authorities in the region, because people living closed to those centres are increasingly apprehensive of their healthcare, given the fact that there are debates in the public domain whether the waste water contamination of Covid-19 patients is likely or not. Therefore, allaying the fear of people living closer to such centres and managing the waste of Covid-19 in the intermediate centre has largely been a challenge for RDHS Kalmunai in the region.

Another major challenge associated in the Kalmunai RDHS region is the spread of misinformation and disinformation of Covid-19 propagated through social media. The study shows that a large number of youth are glued to social media in the Kalmunai RDHS region and the people tend to unquestionably subscribe to what is being spewed in social media as true and authentic. Majority of them believe what is posted or displayed in the social media like Facebook, Twitter and WhatsApp and they do not verify it from authentic sources. News such as false information of Covid-19 testing taking place in certain areas,

wrong numbers of Covid-19 patients in certain areas, illegitimate information on lockdown being enforced in certain areas and so on are some of the misinformation and disinformation being propagated by Facebook and WhatsApp users. With the onset of social media coupled with rapid development of science and technology, everyone tends to become a journalist with a smart phone and internet connection. They are the people who propagate misinformation and disinformation through social media like Facebook and WhatsApp. It is increasingly difficult for authorities to stem such disinformation propaganda in the social media. Therefore, this has become a perennial problem facing the Kalmunai RDHS, MOHs, and hospitals in the region.

6. Conclusion

Covid-19 pandemic severely disrupts the life of the individuals and cripples the economy of countries across the world including Sri Lanka. It is therefore important to defeat and combat the Covid-19 pandemic with health protocol being strictly enforced until the immunization of all people begins in a mass scale. Many countries in the world have declared unprecedented lockdowns and the society in large extends their fullest support to the government in its initiative of combating of Covid-19 effectively. Similarly, the people in the Kalmunai RDHS region face unprecedented challenges due to Covid-19 and extend their cooperation to certain extent towards health care workers serving in MOH, hospitals and Kalmunai RDHS in their efforts to combat Covid-19. The study argues that the community participation in containing any pandemic is absolutely critical and therefore they have to extend their fullest support and corporation with the health care workers and institutions like Kalmunai RDHS to control the Covid-19 pandemic until a credible vaccine for Covid-19 is found and rolled out. Since the infection level is very high in the Kalmunai RDHS lately, implementing suitable policies and working with other institutions is important to combat Covid-19. Moreover, it should be appreciated that the state and non-state institutions and civil society organizations in Kalmunai RDHS region extend their support towards MOHs in respective areas, hospitals, and RDHS Kalmunai to control the transmission of Covid-19 and to ensure the required needs and services are provided to the people in the region. Moreover, as this is an unprecedented health emergency, it is crucial for higher authorities to take immediate steps to provide all the required PPE kits and equipment required for hospitals, MOHs coming under the purview of Kalmunai RDHS to effectively combat Covid-19 pandemic.

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