The Implications of the Coronavirus Pandemic: Preparedness Is the Way Forward

The Institute of National Security Studies Sri Lanka (INSSSL) conducted a roundtable discussion under the theme of "The Implications of the Coronavirus Pandemic: Preparedness Is the Way Forward." The event was held on the 12th of February 2020, at the INSSSL conference room. The panelists for the event included Dr Neranjan Dissanayake, Consultant Respiratory Physician, Rathnapura District Hospital, Dr Paba Pahilawadana, Deputy Director General of Public Health Services, Ministry of Health, Colonel (Dr) Saveen Gamage, Director of Sri Lanka Army Preventive Medicine and Mental Health Services, and Wing Commander (Dr) B Rahuman Booso, the Sri Lanka Air Force Staff Officer at the Directorate of Health Services. The discussion was moderated by Admiral (Prof) Jayanath Colombage, the Director General of INSSSL.

Admiral Colombage introduced the discussion by mentioning that the coronavirus epidemic has been a prominent topic of conversation in Sri Lanka for the past few weeks. He praised the Sri Lankan health authorities for being swift in effectively containing the virus by successfully detecting, quarantining and treating the single confirmed case of coronavirus so far in Sri Lanka, even before the WHO declared it to be a global emergency. He further mentioned that Sri Lanka's quick response was made possible due to the President's quick decision to appoint an action force which brought together the many relevant stakeholders. The Admiral highlighted how everyone rose up to the occasion to do their part, such as the staff at the IDH treating Sri Lanka's first coronavirus patients with no hesitation, the Sri Lankan Airlines crew who volunteered to fly to the source of the epidemic to bring back the students, and the unstinted support provided by the armed forces. Moreover, the fact that Sri Lanka was only the fourth country to airlift its citizens from Wuhan, after the US, Japan and India, is commendable.

The first panelist, Dr Neranjan Dissanayake, focused on addressing the clinical aspect of the coronavirus. He started by giving some insight into the background of the coronavirus. Dr Dissanayake explained that the name "corona" stems from the fact that the virus appears in the shape of a crown when looked at through a microscope. Up to 2002, there were 4 identified coronoviruses, which mainly resulted in mild upper respiratory symptoms (nasal congestion, rhinoria) in immuno competent people. In 2002 this changed with the SARS epidemic strain of the coronavirus, which was significantly more severe than the previous coronaviruses. SARS infected 8000 people and killed 800 people with a mortality rate of 10%.

In 2012, another viral epidemic of the coronavirus, called MERS, infected 2400 people and killed 800, with a mortality rate of 30%. The current strain of the coronavirus, based on currently available information, has infected around 45,000 people and killed 1160. The mortality rate of 2% is less than the mortality rates of SARS and MERS. However, the current strain of the coronavirus is relatively more infectious. Doctor Dissanayake explained that CO-19 has a high mutation rate due to the presence of significant volumes of ribonucleic acids, which results in the virus developing into strains not previously experienced by the human body.

Dr Dissanayake outlined five points that were of critical importance to successfully fight both the current strain of coronavirus, and future epidemics. Firstly, he said that it was important to initiate a multidisciplinary approach, made up of officials from the veterinary institutes, wildlife authorities etc. in order to study Sri Lanka's resident bat population. This was because CO-19 originated in bats, who are a species of mammals, and so studying Sri Lanka's bat population will help to determine if there is a similar viral threat in the future. Secondly, Dr Dissanayake outlined the importance of setting in place a more comprehensive screening system for incoming passengers. Currently, incoming passengers can take paracetamol to be afebrile in order to manipulate the fever detection check points at ports and airports. Thus, the doctor said that issuing special customs forms where passengers have to declare their consumption of paracetamol and temperature in the hours before arriving is one potential measure of tackling this loophole.

Thirdly, Dr Dissanayake mentioned that it is important to have ICU facilities which are quarantined using infection protective equipment, so as to limit the spread of the virus. Ideally, in every district hospital, there should be 4-5 beds with this facility. In addition, it is important for all workers to be provided with adequate protective equipment. Fourthly, Dr Dissanayake highlighted the importance of there being high flow oxygen facilities to reduce the burden on ICU's. At the moment, the ECMO (extracorporeal membrane oxygenation) facility is only available at the Karapitiya hospital. It is important for all regional hospitals to have this facility. Lastly, Dr Dissanayake stressed on the importance of making use of Sri Lanka's talented, vast human resource potential in order to fight this epidemic.

The second panelist, Dr Paba Palihawadana, focused her address on highlighting misconceptions related to coronavirus. One important misconception was the call by some doctors for the public to wear masks. She clarified that wearing masks was not recommended by either the WHO, or the Sri Lankan health authorities at this point of time, and warned the public against unscrupulous individuals seeking to capitalize on paranoia. She also explained the importance of considering practical realities when it comes to wearing masks. For instance, given Sri Lanka's hot, humid climate, wearing a mask for a long period can get very uncomfortable. Critically, touching the mask frequently to adjust it can actually increase the risk of infection. Thus, she stressed the importance of having easily replaceable masks.

A second important misconception which Dr Palihawadana addressed was the general public fear about everything Chinese. She emphasized that packaged food and edible products imported from China is very unlikely to have the potential of transmitting the coronavirus, because the virus cannot survive when the food is cooked at over 70 degrees Celsius. Moreover, as a member of the President's Action Committee on tackling the coronavirus, she elaborated on the extensive measures the government is undertaking to reduce the chances of the epidemic spreading in Sri Lanka. This includes checkpoints set up across all five ports and four airports to detect incoming passengers from China who have fever.

Moreover, she stressed that quarantine officers and public health inspectors constantly monitor recent arrivals for symptoms of the coronavirus even after they leave the airport. Around 2000 recent arrivals are currently monitored, with around 15 patients across four regional hospitals currently kept under observation after displaying potential symptoms of coronavirus. Lastly, one cannot get the coronavirus if you are at least 1 m away from an infected person. Thus, due to the strength of the containment measures, there is no need for the public to not panic and be wary of Chinese citizens.

The third panelist, Colonel Saveen Semage, outlined the army's approach in prevention and quarantine spheres, with a focus on handling the operation of the Sri Lankan students who were airlifted from Wuhan. Colonel Semage outlined that the objectives for the mission were threefold: to prevent the introduction of the disease to the country, to prevent the spread of infection to the people involved in the evacuation process, and to seek to prevent infection within the group of the students. A key guiding principle of the mission was to minimize the number of people exposed to the quarantined students (the number was kept down to 8 people). Other guiding principles were to provide adequate protective equipment to people that came in contact with the students, and to

minimize exposure to the students. The Colonel mentioned that the prevalence of inter-military coordination was critical to the success of the mission, and that the army worked in close coordination with the Ministry of Health at all times.Col Semage mentioned that one potential shortcoming was not using a physiatrist to evaluate the quarantined students, since being continuously quarantined for a significant period could take a toll on mental health.

The fourth panelist, Wing Commander (Dr) Rahuman Booso outlined the Air Force's role in the rescue mission, with particular emphasis on the quarantine roles undertaken by the CBRN (chemical, biological, radiological and nuclear defense unit) of the Air Force.

Wing Commander Booso outlined that the functions of the Air Forces in the context of the mission included the provision of personnel protection equipment to 16 crew members, providing training to the crew on how to handle passengers, as well as the decontamination and disinfection of crew, passengers and aircraft. A critical part of the process was identifying and liaising with the multitude of stakeholders involved, which included the health division of Sri Lankan airlines, the health division of the Airport and Aviation Authority, the Preventive Health Section of the Sri Lanka Army, amongst others.

The role of the CBRN included erecting two chambers, a wet chamber and a dry chamber with a connecting corridor in-between, in order to disinfect the passengers as they disembarked the aircraft. After the passengers left the dry chamber, fully dressed after a shower, they were immediately transported by bus to a secure quarantine location in Diyathalawa. Notably, the Sri Lankan armed forces are only the second armed forces in the region, after Thailand, to have undergone CBRN training with the WHO.

The mission was, by and large, a success. It is now reported that none of the students who were quarantined contracted the coronavirus, and that they would all be released today, with no sign that the virus has spread widely around Sri Lanka. At the end of the discussion, Col Semage noted that the military was already engaged in the process of documenting the steps that were taken to make the mission a success.

The discussion revealed that many government and non-government agencies successfully collaborated in tackling a fast spreading epidemic at short notice. This is a positive sign for Sri Lanka's capability to tackle future epidemics. It is also vital that the recommendations outlined by the various experts are given due consideration, so that Sri Lanka's capacity to respond can be continuously strengthened.