

Co-existing with COVID-19: Engaging the community to strengthen the public health response in Sri Lanka

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Abstract

COVID-19 was declared as a pandemic by the World Health Organization in early March 2020. Sri Lanka until mid-May experienced an epidemic contained within 32 clusters, largely due to a well-planned public health response. Following 2 months of partial shut-down, certain control measures are being relaxed to facilitate economic activities across the country. This paper details this public health response and explores how it could be strengthened to empower the community to co-exist with COVID-19 in a “new normal” environment.

Key words: COVID-19, Public Health, Community empowerment, Sri Lanka

Introduction

The Director-General of the World Health Organization placed a six-point plan to be considered for controlling the COVID-19 epidemic. These 6 areas are as follows: (1) that surveillance is strong, cases are declining and transmission is controlled; (2) health system capacities are in place to detect, isolate, test and treat every case and trace every contact; (3) outbreak risks are minimized in special settings like healthcare facilities and nursing homes; (4) preventive measures are in place in workplaces, schools and other places where it is essential for people to go; (5) importation risks can be managed; (6) communities are fully educated, engaged and empowered to adjust to the “new norm”¹. This comes in a situation where the prospect of having a safe, effective vaccine that can be affordable to the health systems across the world is not within the near future².

The COVID-19 pandemic is still very much active across the globe, recording over 4.3 million reported cases and 293,000 deaths as of 13th May³. Although the numbers are rising, the setback to the economies have swayed many countries, particularly in Europe and East Asia, to start relaxing the restrictions, risking the danger of a second wave of infections. Following those examples, less economically stable countries are also proposing to relax the controls due to major economic hardships to their population. The United Nations has realized the socio-economic issues faced by the countries and have proposed a framework to recover from the uncertainties.⁴ This framework is built on 5 pillars: health first; protecting people; economic response and recovery; macroeconomic response and multilateral collaboration; and social cohesion and community resilience. This effort seeks to strike a balance between controlling the pandemic while restoring the economies within a “new normal” landscape. The term “new normal” conveys a clear message that a pre-COVID day-to-day lifestyle is not possible until the pandemic situation is fully controlled. Hence, for a considerable duration of time, all human activities need to be carried out within a controlled environment that does not increase the risk of virus transmission.

Sri Lanka after an extended period of movement restriction is in the process of relaxing the curfew gradually, to reinstate the day-to-day activities of the population. Still experiencing a cluster epidemic (as of 13th of May 2020) with a recorded 889 cases and 9 deaths⁵, Sri Lanka has announced reopening of the public and private sector establishments from the second week of May. Within this background, this paper

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explores how the public health response could be strengthened to empower the community to co-exist with COVID-19 in a “new normal” environment.

Public health response

The preventive and promotive health arm of the health system in Sri Lanka is well-organized and has over a century successfully delivered its objective of preventing and controlling communicable diseases in the country⁶. It consists of a dedicated field health staff, functioning in 347 Medical Officer of Health (MOH) areas that cover the entire country⁷. Prevention, notification and control action on communicable diseases are among the key functions of the MOHs. The availability of preventive staff at ground level makes it possible to engage them when necessary quickly during an epidemic situation. This is a unique feature in our health system, and it provides additional protection against communicable diseases. The public health response against COVID-19 in Sri Lanka needs to be

reviewed considering this structural and functional arrangement in the preventive arm of the country’s health system.

Broadly, the public health response for COVID-19 in Sri Lanka can be identified under six areas of intervention: (1) prevention of infection reaching the country; (2) containing the infection within the overseas returnees; (3) reducing social gathering and the mobility of the population; (4) detection, isolation and treatment of cases; (5) containing the infection within clusters; (6) staggered relaxation of control measures. The first two interventions intended to keep the infection out of the country or reaching the public. The third to fifth focused on preventing a community spread when the infection reached the public. In order to understand the current epidemic pattern, the future trajectory and co-existence with COVID-19, it is necessary to appreciate the current public health response. Public health actions taken during the initial period is outlined in Figure 1.

26.01.2020	First interim guidelines summary to manage COVID-19 patients issued
26.01.2020	National Action Committee set up
27.01.2020	1 st imported case reported
28.01.2020	Suspected contacts of the 1 st patient admitted at National Institute of Infectious Disease (NIID)
28.01.2020	12 hospitals around the country identified as treatment centres for suspected patients
28.01.2020	Screening of arrivals from China initiated at airports
01.03.2020	Travellers from designated countries directed to self-quarantine
10.03.2020	Travellers from designated countries directed to institutional quarantine
11.03.2020	2 nd patient confirmed
12.03.2020	All travel from Iran, Italy and South Korea to Sri Lanka banned
13.03.2020	Island-wide school closure
13.03.2020	Suspension of On Arrival visas
15.03.2020	12 quarantine centres in Army bases established
16.03.2020	Public gatherings restricted
17.03.2020	Government universities closed
17.03.2020	All returnees from overseas, March 1 to 15, required to be registered at Police Stations
19.03.2020	All international airports in Sri Lanka closed
20.03.2020	Island-wide curfew imposed

Figure 1. **Timeline of the public health response.**

Prevention of infection reaching the country

The establishment of the National Action Committee of the Ministry of Health⁸ in January, even before the detection of first case in the country, was the initial step taken to activate the state mechanism to prevent importation of the infection. Vigilance at ports of entry to the country, with the institution of health checks, restriction of issuance of online and on-arrival visa for travellers from high risk countries, and cancellation of incoming flights and ships from high risk countries were measures taken to prevent or minimize importation of cases^{9,10}. The effect of these early measures was evident in the delay of 6 weeks between the first and the second case detected in the country. Additional measures, such as closing international airports for inbound passengers, were taken after the detection of the second case, to prevent further inflow of infected passengers to the country. No cases were reported among the overseas returnees from the initially-designated high-risk countries, viz. China, South Korea and Iran. The infection was actually introduced to Sri Lanka from European countries, which were not in the high-risk category during that time period.

Containing the infection within overseas returnees

Realizing the potential threat of introducing the infection to the country from overseas returnees, the decision to impose self-quarantine from high-risk countries was taken early followed by mandatory institutional quarantine^{11,12}. With the help of defence forces, quarantine centres were established across the country to keep overseas returnees in quarantine for at least 14 days, with the provision of facilities at no cost to the recipient. This was a complex operation that was carried out to prevent any leakage of the infection to the general community. A detailed risk assessment was done for each returnee at the airport before they were grouped, transported to the centres, and housed in them to minimize potential cross-infection if an infected person was present. Within the centres, health checks were performed 3- to 4-times a day to detect any symptoms of the infection. Those who developed any symptom were isolated, tested and if positive transferred to a designated hospital for treatment.

This methodology of mandatory quarantine prevented infected returnees freely entering and establishing a community outbreak of COVID-19. However, mandatory institutional quarantine on 10th May 2020 was only instituted for selected countries with a high case load at that point in time, due to the limitation

of logistic support. Thus, many returnees from South Asian countries and European countries with a low case load were sent home. However, realizing the possible threat of infection from those returnees who were not sent to quarantine centres, they were asked to register at the nearest police station and to institute self-quarantine at their homes under the supervision of public health staff¹³. It is evident that local transmission of SARS-CoV-2 was initiated by a few returnees who did not heed these public health instructions. Local transmission of the virus from overseas returnee to their immediate family and close contacts established the epidemic within the country.

Reducing social gathering and mobility of population

The initial observations and studies on COVID-19 revealed that the virus is transmitted by close association and through droplets¹⁴. Hence, physical distancing, hand hygiene and minimizing social gathering were identified as possible preventive measures. Community mitigation strategies were targeted to break the transmission chain¹⁵. Based on those recommendations and after the first few cases of local transmission was detected, a decision was taken to temporarily close down the settings of mass gatherings to prevent a community spread. Hence, schools and universities were closed and workers of non-essential services were kept at home^{16,17,18}. Closing down of educational and work settings resulted in less use of public transport, thus reducing the risk of transmission. Further, those measures indirectly helped to keep the majority of the population at home, restricting movement. Enforcing the island-wide curfew on 20th March 2020 was a tool to restrict mobility and prevent social gathering.

Detection, isolation and treatment of cases

Parallel to these preventive efforts, the strengthening of active detection and treatment was a key aspect of the public health response. The first guideline for clinical management of COVID-19 patients was released in late January, even before the first patient was detected. The case definition for testing and isolation went through several updates, and a testing protocol with a clear algorithm was developed^{19,20}. In addition to the National Institute of Infectious Disease (NIID), several other hospitals were designated to treat COVID-19 patients and to observe suspected patients, increasing the capacity of curative services. Allocating new hospitals, building temporary treating facilities, and testing protocols were based on the epidemiological data and predictions²¹.

At the initial stage, only symptomatic patients coming under the case definition were referred for the RT-PCR test. Later, close contacts were also tested. Keeping close contacts under supervision at home or at institutional quarantine centres made it possible for the public health authorities to determine whom to be tested when the index case became positive. This approach supported targeted testing of potentially infected persons while preserving the limited resources, so that the mitigating activities could be sustained. Furthermore, this allowed a gradual improvement of the testing capacity, with training of health staff and quality assurance of laboratory procedures, while the case load was increasing. The approach adopted by Sri Lanka in this regard closely followed the guidance prescribed by the World Health Organization for detection, isolation and treatment¹. These steps helped to streamline the testing facilities, increase testing capacity commensurate with the epidemiological pattern, and develop patient care services based on the need.

Containing the infection within clusters

One of the notable features of the public health response in Sri Lanka was the containment of the infection within identified clusters. When most countries across the globe were battling with widespread community transmission³, Sri Lanka was able to prevent a community spread (defined as the stage 4 of an epidemic) as of 15th May 2020²². The Quarantine and Prevention of Disease Ordinance, enacted in 1897 with subsequent amendments, provided adequate statutory powers to enforce measures that could contain an epidemic to a specified geographical location²³. Within the ambit of those powers, a geographical location that was deemed to have a risk of the spreading of infection and its vicinity could be temporarily cordoned off and locked down to prevent movement of people. Lockdown is generally explained as preventing any movement from or into a geographical location. This was effectively used by the health authorities with the help of the defence forces to limit spread beyond the boundaries of the geographical location. In addition, relocating close contact of confirmed patients to institutional quarantine centres helped to rapidly identify new cases, initiate treatment and minimize spread of the infection to the rest of the community. Health authorities were able to contain the epidemic within 32 community clusters (as of May 15th 2020). No cases were reported from the community for the first 15 days of month of May 2020.

Staggered relaxation of control measures

Restricting movement is helpful to minimize transmission. Allowing higher levels of mobility increases the possibility of transmission of the infection across geographical boundaries. It was found that a high proportion of detected cases remained asymptomatic⁵. If a few undetected asymptomatic cases still remained within inactive clusters, they could be potential sources of infection. Considering this potential for resurgence when lifting movement restrictions, a staggered and slow opening up of economic and other activities was proposed, to keep the epidemic under manageable level. Furthermore, the conceptualisation of “normalcy” in the sense of a “new normal” and not pre-COVID-19 status is essential to keep the epidemic at bay. The public health response thus needed to emphasize the status of “new normal” instead of “normal”, when releasing information on control measures and enforcing new measures. The guidelines provided for reopening work settings, transport system and general safety needed strict enforcement and adherence, while keeping in mind the practicality of those measures²². The re-orientation of the public’s mind towards their responsibilities in breaking the transmission chain and enforcing public health measures, along with the building of a conducive environment, are vital to prevent a resurgence.

Coexisting in a new normal atmosphere

Living with the epidemic is the only option available, until a safe and efficacious vaccine is available at cost affordable to the health system. As no timeline is available for a vaccine, the pandemic is expected to continue beyond another year. Hence, day-to-day activities need to commence in the country to survive with the economic crisis engulfing the entire world.

However, the “new normal” is a drastic change from the pre-COVID-19 era. This warrants a rapid lifestyle change. It is culturally strange, practically challenging and resource intensive. It is difficult to adjust to it at both individual and organizational levels. A widely agreed formula for a “new normal” lifestyle is not in existence, as it depends on the context. Therefore, the new normal is the lifestyle we should adapt to break the transmission chain at all times based on the evidence. Keeping physical distance, hand hygiene and respiratory etiquette in all activities we engage in on a daily basis becomes the practical solution.

Since lifting mobility restrictions to revive the economy is a must, reorientation to the “new normal” situation also becomes a must. Failing to adapt will have major consequences. Firstly, a resurgence of cases and a community spread can occur. Secondly, the economic recovery of the country could be delayed due to high infection rate among workers, inability to maintain essential services, and collapse of supply chains. This can entangle the country in a vicious cycle. Changing behaviour of individuals in a community needs time, training and practice. It depends on the response of the individuals and changing the norms of the society. Hence, community empowering is mandatory to shift from the pre-COVID-19 mind set to a “new normal” situation.

Empowering the community

In a disaster situation like the COVID-19 pandemic, one essential, life-saving action is risk communication. People have a right to know how to protect their health and responsibly take informed decisions to protect themselves and those around them²⁵. However, it needs to be understood that changing people's behaviour is simply not as easy as just informing them of the risks. Health behaviour informed by theoretical models have shown that people will only act on health warnings if they: (1) believe that they are personally susceptible to develop the condition against which protection is required; (2) perceive the condition as severe; (3) perceive the preventive action as effective to reduce the threat; and (4) believe they are capable to perform the preventive action²⁶. However, it is evident that those conditions are not always fulfilled in a pandemic situation like COVID-19. It is also understood that the faith in the predictability and control of events that has dominated our thinking may be too optimistic, and that we have to accept uncertainty and learn to live with it. The only certainty is that the world will be different after COVID-19²⁶.

Therefore, risk communication targeted to prepare the community to live with some uncertainty is necessary. The public health response needs new elements to build confidence while acknowledging uncertainty of the epidemic's behaviour. This is where a strong behavioural change communication campaign is necessary. The message needs to come from all stake holders and must empower the community, must be delivered frequently, continuously and creatively. Another area needing appropriate response is stigma, misinformation or fear psychosis. The strategy must identify drivers and facilitators to guide the public to comply with health messages and make them active

participants²⁷. Enforcement alone, without ownership by the community, is unlikely to sustain any behavioural change.

In addition, behavioural change will not sustain without a conducive environment²⁸. Examining the current context reveals that physical distancing in public transport is only possible if the transport system is capable to support it. Frequent hand-washing is only possible in settings where running water is available and a continuous supply of soap is a reality. In the long run, the supply and purchasing of alcohol-based detergents becomes unaffordable to many institutions and for the public. The same rests with the wearing of face masks. The availability of appropriate, quality-assured face masks, affordability for ordinary citizens, and proper disposable methods preserving environment need serious attention. Therefore, beyond efforts to change behaviour, initiatives for structural modifications and resource disbursement to create a conducive environment are essential in the public health response. Empowering the community to place health concerns on COVID-19 as a priority issue in their agenda is mandatory to transform and sustain the change towards “new normal” atmosphere.

Conclusion

The public health response in Sri Lanka so far has been able to contain the COVID-19 epidemic within manageable levels. However, the future of the control measures largely depends on the resilience of the public to adhere to the “new normal” situation created by the epidemic. Hence, it is necessary to create opportunities for the community to positively engage with the control measures and modify the environment enabling community engagement.

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