

Updates



Community transmission of COVID-19 in Sri Lanka: the debate and its implications on action orientation

- A Position Paper from the College of Community Physicians of Sri Lanka

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Background

As of 8th November 2020, according to the WHO Coronavirus Disease (COVID-19) Dashboard, there have been more than 49 million cases and 1.2 million deaths of COVID-19 in the world (1). At present, many countries are fighting hard to control its second wave (2), while Sri Lanka is experiencing the worst ever spike in the evolution of the disease. Although in September, the total number of confirmed cases reported was only 11, this number had drastically increased over the next months to 13,419 confirmed cases with 34 deaths by 8th November 2020 (3). Amongst these cases, the vast majority (9491 cases) belonged to the cluster of Apparel Factory Workers in Minuwangoda and that of Peliyagoda fish market according to the Epidemiology Unit, Ministry of Health (3). This surge of cases (4) and their

implications have caused a significant challenge in maintaining the smooth functioning of the health services, economy of the country and day to day living of the people. In controlling the spread, movement restriction of the people has been in operation, especially via quarantine curfew imposed in high-risk geographical areas and with this, the fact whether Sri Lanka is in the “community transmission stage or not” has created a heated dialogue among the general public as well as the scientific community.

Undoubtedly, assessing the level of transmission is key to evaluating the overall COVID-19 situation in a given area and thereby for guiding essential decisions on response activities and tailoring epidemic control measures (5). The objective of this position paper is to indicate the College of Community Physician of Sri Lanka's position on the status of disease transmission in

Sri Lanka, by exploring the relevant scientific evidence and the ground realities with a view to facilitate the present disease control activities in Sri Lanka.

The WHO classification of COVID-19 transmission and definition of community transmission

The WHO previously defined four transmission scenarios to describe the dynamic of the epidemic: no reported cases (including both zero transmission and the absence of detected and reported cases), sporadic cases, clusters of cases and community transmission (6-7). Now that many countries are experiencing community transmission and seeking to adjust public health and social measures to various levels of intensity, an update of the transmission classification has been released this week by the WHO to provide more granularity. It has incorporated a range of indicators to capture the transmission intensity, in order to aid decision making (5). In addition, community transmission (CT) has been further divided into four levels, from low incidence (CT1) to very high incidence (CT4).

Consequently, the WHO transmission classification currently comprises seven scenarios (5):

Scenario 1 - No (active) cases

Scenario 2 - Imported/ Sporadic cases

Scenario 3 - Clusters of cases

Cases detected in the past 14 days are predominantly limited to well-defined clusters that are not directly linked to imported cases, but which are all linked by time, geographic location and common exposures. It is assumed that there is a large number of unidentified cases in the area. This implies low risk of infection to others in the wider community if exposure to these clusters is avoided.

Scenario 4 - Community transmission (CT) further divided into following levels:

CT1: Low incidence of locally acquired, widely dispersed cases detected in the past 14 days with many of the cases not linked to specific clusters; transmission may be focused on certain

population sub-groups; and low risk of infection for the general population.

CT2: Moderate incidence of locally acquired, widely dispersed cases detected in the past 14 days; transmission less focused in certain population sub-groups; and moderate risk of infection for the general population.

CT3: High incidence of locally acquired, widely dispersed cases in the past 14 days; transmission widespread and not focused on population sub-groups; and high risk of infection for the general population.

CT4: Very high incidence of locally acquired, widely dispersed cases in the past 14 days; and very high risk of infection for the general population.

Similar types of transmission scenarios /classifications and definitions for community transmission have been adopted elsewhere as well. For example, the European Centre for Disease Prevention and Control adopts a classification similar to what the WHO has earlier prescribed (8). The Australian Capital Territory (ACT) also adopts a similar simplified definition as “community transmission where there are large numbers of local transmissions occurring and a direct source of exposure cannot be identified” (9). The Centres for Disease Control and Prevention (CDC) defines community spread as “people have been infected with the virus in an area, including some who are not sure how or where they became infected”, which is also in line with the definition of WHO (10).

The WHO classification of COVID-19 transmission for a given locality is based on a process of self-reporting by that locality, while such classification of a locality needs to be reviewed on a weekly basis and revised as new information becomes available. In addition, since the stage of transmission of a geographic area is expected to change (improve or worsen) over time, differing degrees of transmission may be present within countries/territories/areas concurrently (5-6). With regards to the country situation, as of 1st November 2020, the WHO has categorised Sri Lanka, as a whole, under scenario 3

transmission (i.e., clusters of cases) among other countries (11). According to the Ministry of Health/Epidemiology Unit, most cases are linkable to the existing clusters (3). However, nearly three quarters of the reported cases are from Western Province and there are many regional variations in the transmission intensity among different provinces and sometimes among districts within the province, suggesting that Sri Lanka needs to adopt a geographically contextualized transmission classification system in addition to the overall country level transmission scenario. However, it should also be emphasized that our position to analyse regional transmission scenarios should not undermine the national epidemiological realities and the control strategies based on the ground realities of the country as a whole. In concurrence, the need for regular reviews, monitoring of the situation and addressing the national health agenda remains to be of utmost importance throughout.

Indicators to determine community transmission

In order to determine community transmission, the WHO proposes four primary indicators, namely the COVID-19 hospitalization rate, COVID-19 attributed death rate, case incidence per 100,000 population per week averaged over a two-week period and test positivity proportion from sentinel sites averaged over a two-week period (5). It further indicates threshold levels for these primary indicators, which need to be adjusted to the local context. It has also proposed several additional indicators which could support the determination of community transmission, such as effective reproductive number (R_t), doubling time and proportion of unlinked cases amongst new cases (5). Since it is now possible to assess the level of community transmission objectively, it is imperative that Sri Lanka too develops the framework for this analysis soon addressing the contextual realities, working out the necessary parameters and the threshold levels. This can help minimize different misinterpretations of the transmission scenario in the country and in different regions. However, as a pre-

requisite, it is important to address the limitations, such as the paucity of publicly available data on COVID-19 in the country and lack of periodic analysis of data, which are essential for eliciting these indicators pertaining to Sri Lanka.

Transmission level is not the only basis to assess the current situation to introduce, adapt or lift the control measures

It is noteworthy that decisions taken on swift control measures have been made not only to implement circuit breaker lockdowns to arrest the disease spread, but also to minimize the economic and social loss of the country (2). Recently, it has been suggested that the harm caused by public health interventions against COVID-19 must not be ignored when taking decisions in its control (12). On the other, it is documented that in some countries, decisions to re-introduce restrictions have been influenced simply by the rising incidence of the disease (2). In addition, the capacity of the country to carry out contact tracing and robust level of testing on daily basis invariably determine the extent and the duration of stringent measures implemented across the locality (13). All these facts need to be considered when making decisions in relation to the Sri Lankan context.

According to the current recommendations of the WHO, the decision to introduce, adapt or lift Public Health and Social Measures (PHSM), or to scale up health system capacity, should be determined based on an analysis of the level of transmission, the health system response capacity, and other contextual factors. It further recommends that a Situational Level should be assigned to a geographic area that will inform whether and how to adjust PHSM (5). In this backdrop, it is clear that the decision to introduce or lift the PHSM in Sri Lanka will have to take into account the local realities including the public health and institutional response capacities and the contextual factors in the backdrop of the effect that these measures may have on the general welfare of the society and individuals. Further, these decisions need to be constantly reviewed by a Technical Committee with relevant expertise.

The importance of identifying the stage of transmission accurately

Every scenario depicted in the WHO transmission classification is action oriented. Thus, the main purpose of such classifications is to inform a country how its action should be re-oriented, scaled up or intensified according to the shift from one stage to another. Thus, It would also prepare the country for the next level. As for Sri Lanka, during the early phase of the epidemic, adoption of the control strategies pertaining to scenarios 1 and 2 is highly commendable, which enabled the containment of the first wave using the whole-of-government and whole-of-society approach. Though these strategies were continued successfully during the first wave, whether the lessons learnt in managing small and multiple clusters were transformed into management of larger clusters in accordance with action targeted for preventing a possible community transmission is not visible. This depicts the importance of identifying the stage of transmission accurately to avoid unforeseen and undetected community transmission resulting in deaths in the community without ever having to seek healthcare.

Acceptance of a “community transmission” may have implications on the general public views, such as misperceptions that stringent control measures would invariably entail an “immediate lockdown” of the country. Thus, measures need to be adopted, while taking such country, regional and contextual realities into consideration. At the same time, it is pertinent to understand that from a layman's point of view, categorisation of the whole country as not having a community transmission could impinge on the risk perception of some individuals thrusting them not to adopt DReAM (social Distancing, Respiratory Etiquette, Aseptic practices, proper use of face Mask) practices (10) prescribed by the Ministry of Health, Sri Lanka (14). This highlights the need for a well-planned and effective risk communication strategy on disease transmission scenarios that can be embarked carefully among the general public. In this regard, the country should put more emphasis on Education, Engagement & Empowerment of the community in taking

appropriate actions to follow the “new normal life” pattern defined locally until a vaccine is introduced and a reasonable vaccine coverage is achieved.

Conclusion and way forward

The focus of attention should be diverted to identifying and analysing more objective and locally relevant criteria for assessing the stage of transmission. While the categorization of a country on its transmission status is acknowledged for a global generic data reporting purpose, control measures must be dependent on the country and local trends of these “numerical assessments” with routinely revisited dynamic threshold levels. In addition, these decisions must be frequently re-assessed in line with the capacities of the country. Irrespective of whether Sri Lanka is theoretically categorized as in the “country level community transmission” scenario or not, the relevant actions pertaining to that phase need to be implemented based on the context-specific objective assessments and the trends, in order to prevent an escalation of the disease. In this backdrop, the guidelines issued by the Ministry of Health, Sri Lanka titled “Instructions on Alert Levels in COVID-19 Country Response and Permitted Functions” would serve as an important platform in this regard. As clearly highlighted, Sri Lanka urgently needs to assess its risk, level of community transmission and the system capacity at different levels and to rapidly implement the necessary measures at the appropriate scale to strike a balance between COVID-19 transmission and the economic, public and social impact to the nation.

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