



The second wave of COVID-19: time to think of strategic stockpiles

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Dear Editor:

We have learned a lot from this COVID-19 experience. We now know what are the essential commodities that are of principal importance to manage this outbreak. While it may take some time for a vaccine to be universally available, a second wave of COVID-19 surge, although not definite, might hit us anytime (Argulian 2020; Xu and Li 2020). However, we have an opportunity to be prepared. With most of the first affected countries easing the lockdown restrictions as they have bent the curve of disease spread, focus should not just be on bringing up the economy but also on being diligent on personal protective measures and building up stockpiles of essential commodities which were in short supply during the first wave.

Given that facilities for international transportation of goods were available during the first wave, countries may have obtained essential commodities by this means. However, it is evident that this strategy has caused a significant delay in addressing the needs of hospitals and communities, putting healthcare professionals and the general population at risk. Moreover, not every country was able to make a timely purchase of the commodities because of the universal demand.

We could have avoided this delay if national stockpiles had been maintained. But the fact is, most countries do not have such stockpiles, nor did they conceptualize one. Now that we have seen the devastation this virus has caused so far, the strategic importance of health-related stockpiles during a

pandemic is understood. We have learned this lesson the hard way.

It is now time to look at models to understand how this can be done. Canada and the United States are among the countries that have a working model of a national emergency strategic stockpile (NESS) (Esbitt 2003; Henry 2019). The NESS of Canada includes medical equipment and supplies such as personal protective equipment, ventilators, stretchers, X-ray machines and mini clinics (supplies for primary care). It also includes pharmaceuticals such as antibiotics and antivirals, analgesics, anesthetics and medical countermeasures against chemical, biological and radio-nuclear events; furthermore, it includes social service supplies such as beds, towels, blankets and generators (Henry 2019). These materials are kept on standby to be distributed throughout the country in case of an emergency such as a pandemic. This framework of a stockpile can be modified as per requirement and be adopted by countries with the addition of the essential materials that were required during the first wave of COVID-19.

In the uncertain interval period that we have after the first wave, audits should be held to identify how each one of us could have done better. Estimates should be made on what resources are needed to tackle another wave of COVID-19 effectively. Governments worldwide should invest in either manufacturing or purchasing the necessary commodities that were required and that ran out of stock during the first wave. The stockpiles should preferably be placed in reserve at strategic locations around the country so that they are readily available to communities without any delay during an emergency.

If having such physical stockpiles at strategic locations around the country is not feasible due to financial constraints, a virtual stockpile, an inventory of items needed to tackle an outbreak can be maintained along with a predefined comprehensive logistics plan which should include the list of companies (collection points) that will provide the necessary

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Table 1 Advantages and disadvantages of having physical and virtual health-related stockpiles

Physical stockpile	Virtual stockpile
Advantages	
Always available for dispatch	Finances are allotted only if a crisis occurs
Faster decision to deployment times	Maintenance free
Disadvantages	
Cost of creation	Dependence on companies to manufacture essentials at the time of crisis
Quality control	Organizing the supply chain at the time of crisis
Maintenance and security	Slower decision to deployment times

essential items, means of transport and storage locations (Bobdey 2012). Even though a virtual stockpile means effectively maintaining the stockpile for free, there are major disadvantages as we must depend completely on companies for production, and also organize the supply chain during the hour of crisis. Hence, having a physical stockpile is in all means superior (Table 1). Of course, there are challenges like cost of creation, quality control, maintenance and security, but considering the devastation that COVID-19 has caused so far, we should be thinking ahead of all this.

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