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POLICY BRIEF

Harmonizing Health Standards for Post-Quarantine COVID-19 Settings

A food court marks seats to be left empty to ensure safe distancing between customers. Photo credit: ADB.

There is a need for globally coordinated standards and principles that allow room for countries to adapt their policies.

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Introduction

The coronavirus disease (COVID-19) pandemic is the defining global health crisis of our time. Since its emergence in late 2019, the virus has spread to 188 countries in every continent except Antarctica. Millions have been infected and more than 530,000 people have died, and these numbers continue to rise daily.[1]

The disease is caused by SARS-CoV-2, a novel pathogen from a large family of coronaviruses that have caused epidemics in the past. Unlike its predecessor, which was responsible for SARS in 2003, SARS-CoV-2 is more contagious and manifests itself in much broader clinical spectrums, ranging from asymptomatic presentation to severe pneumonia and death. Coupled with other factors, such as our increased global interconnectedness and lack of effective treatments, this has contributed to the rapid spread of the virus and poses a challenge of unprecedented scale.

Researchers worldwide are rushing to develop antivirals and vaccines with clinical trials for over 100 vaccine candidates. However, developing vaccines may take around 12 to 18 months and efforts may be further limited by regulatory hurdles, liability concerns, manufacturing issues, and the lack of robust data. Public health (non-pharmaceutical) interventions are therefore important. Until a vaccine becomes available or effective, they are the only options available to governments to reduce the caseload.

Public health interventions are typically deployed in and across societies at varying points of the virus transmission pathway network. The goal is to flatten the curve of infection to prevent the overloading of health systems by slowing transmission and spreading case incidents over a longer period. This is conceptually framed by our understanding of R0, the basic reproduction number, which is estimated to be between 2 and 3 for COVID-19.[2] By bringing this number down, governments may reduce the epidemic's intensity, thus taking pressure off health systems.

However, epidemic control measures come with attendant societal and economic costs, and the more rigorous the public health measures, the larger the nonpublic health costs. Closing off borders dampens trade, shutting down cities upends businesses, etc.—all of which are expected to cost the global economy upwards of $1 trillion dollars in 2020.[3] As Nobel Laureate economist Robert Schiller puts it, there are dual contagions at play here—a massive health contagion and a parallel contagion of severe economic distress. "Lives or livelihoods" is a false dichotomy; it's "lives and livelihoods."

What then is in the menu of options for policymakers to consider and when should policymakers deploy which interventions? What are the minimum measures to be retained when adjusting for economic disruptions? We take a look at the main interventions available, the economic and health considerations surrounding them, and discuss how this balancing act might play out in real life.

This policy brief is based on a presentation by the National University of Singapore at the Policy Actions for COVID-19 Economic Recovery (PACER) Dialogues organized by the Asian Development Bank.

Policy Options

Epidemic control measures are usually built around key points in the virus's transmission pathways, forming three key layers of defense against the spread of the disease.

Table 1: Epidemic Control Measures

Measures		Examples
Border controls	From source area, which may be extended over time	From Wuhan, then Hubei; closure of the Victoria, New South Wales border in Australia
	From source country (outside source area but administratively easily delineable)	From the whole of the People's Republic of China
	From other countries or areas from which there have been incidences of infections	Visa suspension for select nationalities

Active measures to identify and isolate cases and close contacts	Detection of potential cases	Imported potential cases	Through screening at healthcare (and other) facilities
		Suspected unlinked confirmed cases	
		Contacts of confirmed imported cases	By contact tracing
	Isolation or quarantine	Healthcare facilities (hospitals)	Hospital infection control, protection of healthcare personnel
		Homes	
		Quarantine facilities	
	Treatment, including financial support for treatment costs and loss of income		With Remdesivir, Ritonavir/Lopinavir
	Release		Release after ascertainment of non-infectiousness
General measures (Community measures, mitigating measures, etc.)	Measures to reduce contact within the community (social/safe distancing)		Reducing public gatherings, school, and business closures
	Public communications		Community sanitation and hygiene, mask use, self-isolation if unwell
	Provision of necessities and other supplies		Masks, medical, and food supplies
	Others		Environmental cleansing, Business continuity planning, etc.

Source: NUS Saw Swee Hock School of Public Health, 2020[4]

Border controls seek to prevent the importation of the virus into the country, while active and general measures are deployed to reduce community transmissions once imported cases have been “seeded” within national borders. All three layers of defense involve some form of “safe distancing,” a term encompassing a broad set of measures aimed at reducing physical interactions on individual, community, and population levels to prevent human transmissions. A point to note here is that the term “social distancing” is less preferred as the social elements of interaction are important for mental health and should be preserved wherever possible. It should be emphasized that these interventions are a suite and are not mutually exclusive. In fact, they work best when deployed together.

There is a high degree of variation in the exact implementation (extent, scale, duration) of public health interventions, with varying results as well. New Zealand’s tiered lockdown of 77 days managed to completely “eliminate” the virus. In India, daily case numbers continue to climb despite stringent controls that commenced late-March. Taipei,China went without a lockdown but still managed to control its disease situation effectively; success factors include quick preparation and early intervention. In the United Kingdom, a “herd immunity” strategy was infamously attempted during the outbreak’s early stages, triggering widespread backlash and an eventual reversal in policy.

This lack of harmonization in policymaking is largely inevitable. SARS-CoV-2 emerged and spread with such rapidity that many governments resorted to implementing a cascade of changing, ad-hoc interventions, which continues to play out even as countries begin to lift restrictions. Different countries also have vastly different resources with very different transmission and socio-political contexts as well; and these will drive the practical implementation and lifting of restrictions. There is no playbook to follow, and every country has to “cross the river by feeling the stones,” as former Chinese leader Deng Xiao Ping said.

A middle ground thus has to be reached. Globally coordinated standards and principles could be maintained, promulgated, and evolved in the light of new evidence while allowing room for countries to consider and adapt guidance dynamically. The World Health Organization (WHO) has already published some general guidance for containing the current health contagion. We would do well to incorporate socioeconomic factors for a more nuanced balancing of lives and livelihoods.

Objectives, Considerations, and Approaches

There are four objectives to achieve in these difficult situations. First, to test, trace, and isolate cases as soon as possible to avoid secondary cases and widespread community transmission. Second, to prevent hospital and health system resources from being overwhelmed. Third, to enable cautious economic reopening so that livelihoods can be maintained. And lastly, to prepare citizens and businesses for the profound changes that a COVID-19 world necessitates.

Balancing these four objectives will be dynamic, requiring multidisciplinary decision-making and access to real-time information. A key need is a better understanding of risk. There is no threshold of zero risks, and the probabilistic risks of business activities versus health system capacity to cope with a surge in cases should be used in decision-making. There is no ex-ante right or wrong here. Options should be openly debated by officials across health and economic agencies.

Regular severity monitoring and risk assessments will be critical to inform policymaking and actions to be taken at each level of threat. For one, there is useful, albeit dynamic data emerging from the United States about the risks of various business activities across 100 well-known occupations.[5] These were derived via an evaluation of three physical attributes: contact with others, level of physical proximity, and exposure to disease and infection. Public officials, who have the option to be selective in the activities and businesses to be permitted, should study these carefully when calibrating "lockdowns" or unlocking measures.

Critical enablers to a successful COVID-19 internal response—and subsequently, a less dangerous reopening—will involve the fulfillment of various stakeholder roles on the part of health agencies, the rest of the government, and the public. On the clinical front, health agencies must test, trace, and isolate cases aggressively and preserve health system capacity. The rest of the government will have to augment their work, ensure strong enforcement and supply chain effectiveness, and maintain sound communications and public trust. Economic rescue packages will be critical to support livelihoods and foster cooperation with public health measures. On the side of the public, strong digital enablement and

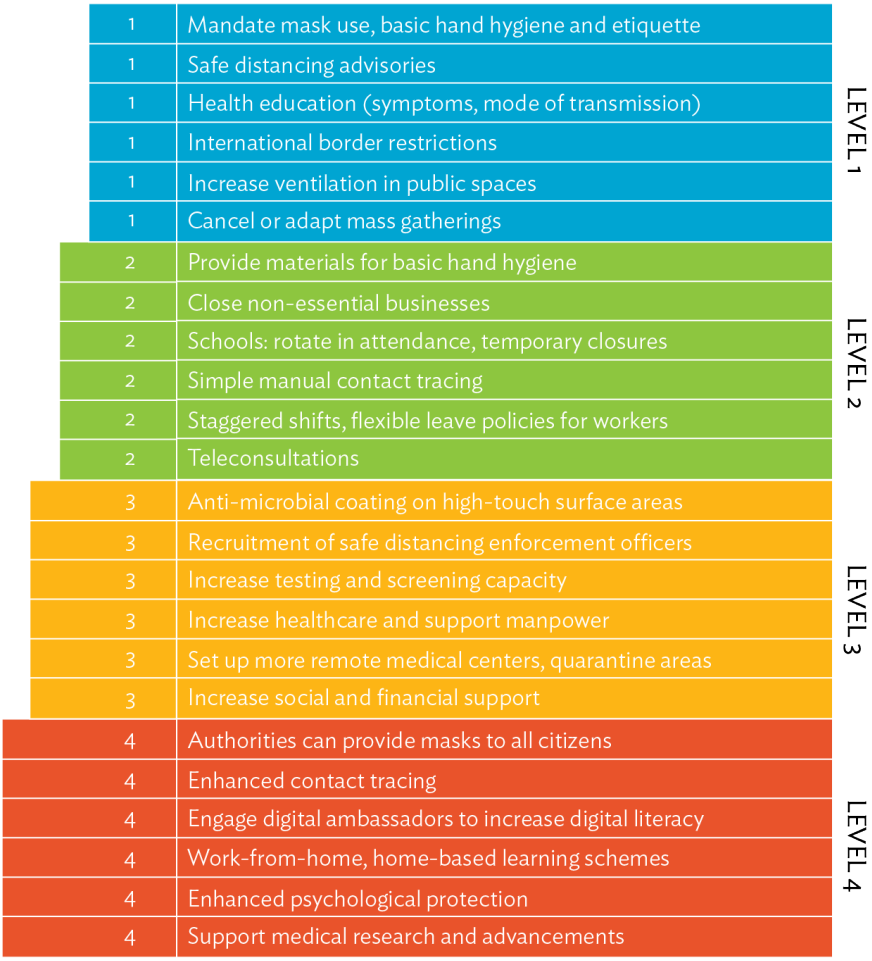
an understanding and willingness to sacrifice for a greater good seem to correlate highly with a country's success.

We posit that a recurring loop of risk assessments, early detection of outbreaks, and micro-lockdowns will define the "next normal"—analogous to a game of whack-a-mole. We are already seeing this in the People's Republic of China, Republic of Korea, and most recently, Australia. Again, it is important to keep in mind that countries unlock not because they are out of the woods, but because the economic consequences of safe distancing are too damaging and unacceptable to the public.

Countries will have to define the acceptable levels of risks vis-a-vis economic implications and continuously implement and relax public health interventions depending on the outbreak situation. Business and municipal disruptions will form a recurring theme—both will have to reinvent. Businesses may switch to "tele-everything" structures with greater emphasis on e-commerce. Neighborhoods and cities may evolve in tandem to become more self-contained and greener.

We have provided here a stepladder approach based on resource availability to what we deem as minimum measures for a post-lockdown period for policymakers to consider. As aforementioned, there is no single formula for all, and careful consideration is needed based on a country's capacity and infrastructure. That said, our view is that public health measures, such as mask-wearing and handwashing or sanitizing are safe, inexpensive, and incur minimal inconvenience, and as such should be widely adopted.

Table 2: Minimum Measures for a Post Lockdown Period



Source: Author.

A final word on cross-border movements—there is a tremendous opportunity and need for countries to work together to harmonize inbound and outbound travel protocols and standards. The European Union has already begun to lift nonessential travel restrictions on 14 “safe” countries; decision factors include the epidemiological situation of a country, reciprocity, and reliability of national data. [6] "Fast lane" arrangements with multiple preconditions (e.g., pre-departure and post-arrival health measures, controlled itineraries) are also being trialed across countries and municipalities. Moving forward, countries may consider developing central registries for test results, interoperable digital trackers, and standardized lab techniques to better facilitate such movements.

[1]Johns Hopkins University. 2020. COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins. Retrieved 1 July 2020.

[2]A. Tan. 2020. Everyone Has Part to Play to Flatten Epidemic Curve: Expert. The Straits Times. Retrieved 20 June 2020.

[3]World Economic Forum. 2020. This Is How Much the Coronavirus Will Cost the World's Economy, according to the UN. Retrieved 20 June 2020.

[4]NUS Saw Swee Hock School of Public Health. 2020. COVID-19 Science Report: Containment Measures. Retrieved 1 July 2020.

[5]M. Lu. 2020. The Front Line: Visualizing the Occupations with the Highest COVID-19 Risk. Visual Capitalist. Retrieved 28 June 2020.

[6]Council of the European Union. 2020. Council Agrees to Start Lifting Travel Restrictions for Residents of Some Third Countries. Retrieved 4 July 2020.

Resources

J Lim. 2020. Minimum Public Health Interventions for Post COVID-19 Lockdown: Lives and Livelihoods . Presented at the Policy Actions for COVID-19 Economic Recovery Dialogues of the Asian Development Bank. 1 July.

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