

Contain, not detain: Best Practices of Countries that Have Successfully Controlled the Outbreak

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Executive Summary

Singapore, Hong Kong, Taiwan, South Korea, and Vietnam have been reported to successfully flatten the curve of the COVID-19 outbreak without having to resort measures that have potential adverse effects on economic and social life. The goal of this study was to determine their best practices through literature and theme analysis and to use these as the basis for forming recommendations contextualized to our setting.

Recommendations

- **Adapt containment measures.** The DOH should adapt early detection, contact tracing, isolation and quarantine measures to contain COVID-19.
- **Create a telecommunicated, national automatic triage system.** The DOH should work with telecommunications sector to create a triage system operated through phone calls.
- **Expand 4P's coverage.** The DSWD should expand the program to include newly-identified poor individuals from ECQ.
- **Create quarantine facilities.** The government should compensate those isolated cases.
- **Ensure the functionality of Barangay Health Centers.** The DOH should monitor and ensure that health centers continue to operate for primary care operations.

Results & Discussion

I. Rapid Scaling of Testing

- A. South Korea had mass production of kits (15,971 kits for 522,770 people)¹, automatic testing methods (diagnostic machine testing 100 patients in 4 hours)², and utilized 118 outpatient testing facilities with drive-through testing.³

¹ Park Gi-Taek. "Demands for Korean Testing Kits Soar amid COVID-19 Pandemic." *Korea Biomedical Review*, (2020) , www.koreabiomed.com/news/articleView.html?idxno=7736. (accessed on March 18, 2020)

² Ivan Watson et al. "How This South Korean Company Created Coronavirus Test Kits in Three Weeks." *CNN, Cable News Network* (March 13, 2020) edition.cnn.com/2020/03/12/asia/coronavirus-south-korea-testing-intl-hnk/index.html. (accessed on March 18, 2020)

³ Watson, Ivan, et al., "How This South Korean Company Created Coronavirus Test Kits in Three Weeks." (March 13, 2020)

- B. Singapore rapidly scaled up their RT-PCR laboratory testing, allowing them to handle 2,200 tests a day in all public hospitals.⁴
- C. Outpatient testing in Hong Kong had those with symptoms be given a test tube to take home and return with a sputum sample. Results were given via text message if negative or the Department of Health if COVID-19 positive.⁵

II. Restrictive Border Controls

- A. Studies show minimal delay in disease spread from a few days to four months⁶⁷ with effective travel restrictions, giving time to employ measures for mitigating disease spread (i.e. enforcing social distancing).⁸
- B. Singapore initially screened the temperature of travelers from Wuhan and eventually air travelers, later denied entry to travelers from selected countries and required returning residents to undergo 14-day self-quarantine.⁹
- C. Taiwan assessed passengers from Wuhan for symptoms. Peoples' 14-day travel history were included in their health insurance ID cards. The household registration system and foreigners' entry card gave hospitals, clinics, and pharmacies legal access to patients' travel histories.¹⁰

III. Ensuring Quarantine Adherence

- A. Taiwan¹¹ and Singapore¹² had risk-stratification and quarantined appropriate individuals. Contacting and tracking of mobile phones were done for surveillance.
- B. Singapore had spot checks for those on home quarantine. Sanctions were SGD 10,000 fines or 6-months imprisonment. Financial support given to quarantined.¹³
- C. A quarantine facility was made from an unoccupied public housing complex in Hong Kong. The police enforced quarantine and public safety.¹⁴

IV. Centralized Government Response

- A. Taiwan activated their Central Epidemic Command Centre, identifying 124 key measures, from medical supplies and equipment to economic stimulus packages in monitoring the country's efforts against the outbreak.¹⁵
- B. Singapore passed laws, mobilized their Public Health Preparedness Clinics (PHPCs) for primary care, extended medical leaves, advised against mass gatherings, and encouraged businesses to utilize telecommunication, among others.¹⁶
- C. Vietnam is providing credit and fiscal packages to businesses affected by the outbreak along with tax rescheduling and exemptions for some medical supplies. Their labor ministry ceased issuing work permits to foreigners from areas with COVID-19.¹⁷

V. Public Information and Communication

- A. Real-time information on areas to avoid or a map of local supplies was provided in Taiwan.¹⁸ Korea made a website with statistics and epidemiological links.¹⁹

⁴ Vernon J. Lee, Calvin J. Chiew and Wei Xin Khong "Interrupting transmission of COVID-19: lessons from containment efforts in Singapore", *Journal of Travel Medicine* (March 13, 2020) <https://doi.org/10.1093/jtm/taaa039>

⁵ Jason Beaubien, "In Age of COVID-19, HK Innovates To Test and Quarantine Thousands", *National Public Radio*, February 23 2020, <https://www.npr.org/sections/goatsandsoda/2020/02/23/808290390/in-age-of-covid-19-hong-kong-innovates-to-test-and-quarantine-thousands> (accessed on March 18, 2020)

⁶ Neil M. Ferguson et al. "Strategies for mitigating an influenza pandemic" *Nature* 442 (2006): 448–452 <https://doi.org/10.1038/nature04795>

⁷ Ben S. Cooper et al. "Delaying the International Spread of Pandemic Influenza" *PLOS Medicine* 3,6 (2006): 0851-0852. <https://doi.org/10.1371/journal.pmed.0030212>

⁸ Joshua M. Epstein et al. "Controlling Pandemic Flu: The Value of International Air Travel Restrictions" 2,5 (2007): 9-10 <https://doi.org/10.1371/journal.pone.0000401>

⁹ Yixiang Ng et al. "Evaluation of the Effectiveness of Surveillance and Containment Measures for the First 100 Patients with COVID-19 in Singapore -- January 2-February 29 2020" *Morbidity and Mortality Weekly Report*, 69 (2020) <https://www.cdc.gov/mmwr/volumes/69/wr/mm6911e1.htm> (accessed on March 18, 2020)

¹⁰ Jason Wang, Chun Y. Ng, and Robert H. Brook. "Response to COVID-19 in Taiwan", *Journal of the American Medical Association*, (March 3, 2020)

<https://jamanetwork.com/journals/jama/fullarticle/2762689>

¹¹ Jason Wang, Chun Y. Ng, and Robert H. Brook. "Response to COVID-19 in Taiwan" (3 March 2020)

¹² Rachel Pung et al. "Investigation of three clusters of COVID-19 in Singapore: implications for surveillance and response measures" *The Lancet*, (March 16, 2020)

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30528-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30528-6/fulltext) (accessed on March 18, 2020)

¹³ Paul Mackessey "Mass testing, alerts and big fines: the strategies used in Asia to slow coronavirus", *The Guardian*, (March 16, 2020)

<https://www.theguardian.com/world/2020/mar/11/mass-testing-alerts-and-big-fines-the-strategies-used-in-asia-to-slow-coronavirus> (accessed on March 18, 2020)

¹⁴ Jason Beaubien, "In Age of COVID-19, HK Innovates To Test and Quarantine Thousands", *National Public Radio*, (February 23 2020)

¹⁵ Winston Wen-yi Chen, "Lessons on handling the COVID-19 outbreak from Taiwan", *iPolitics*, (March 17, 2020)

<https://ipolitics.ca/2020/03/17/lessons-on-handling-the-covid-19-outbreak-from-taiwan/> (accessed on March 18, 2020)

¹⁶ Vernon J. Lee, Calvin J. Chiew and Wei Xin Khong "Interrupting transmission of COVID-19: lessons from containment efforts in Singapore", *Journal of Travel Medicine*

(March 13, 2020) <https://doi.org/10.1093/jtm/taaa039>

¹⁷ Dezan Shira et al. "Vietnam Business Operations and the Coronavirus: Updates", *Vietnam Briefing*, (March 18, 2020)

<https://www.vietnam-briefing.com/news/vietnam-business-operations-and-the-coronavirus-updates.html/> (accessed on March 18, 2020)

¹⁸ Stacey Chen. "Taiwan Sets Example for World on How to Fight Coronavirus." *ABC News Network*, March 13, 2020, ,

abcnews.go.com/Health/taiwan-sets-example-world-fight-coronavirus/story?id=69552462 (accessed on March 18, 2020)

- B.** Physical educational materials on COVID-19 were placed in strategic locations in Vietnam,²⁰ information was also disseminated via a YouTube viral video.²¹
- C.** Taiwan also used mobile applications to disseminate information on COVID-19 transmission, areas to avoid and best health practices.²²

Recommendations

- 1. Seek to contain the outbreak through early detection, contact tracing, isolation, and quarantine.** This can be facilitated through the acquisition of more diagnostic kits and the provision of support for locally-developed COVID-19 diagnostic kits, recruitment of capable laboratory facilities and personnel, creation of testing protocols, and the facilitating of rapid field testing.
- 2. Create a national automatic triage system.** The DOH in coordination with telecommunication companies should act to facilitate free access to hotlines for screening of symptomatic individuals, disseminate government announcements, and create systems for surveillance and monitoring of quarantined individuals.
- 3. Expand 4P's coverage to include the newly-poor created by the ECQ.** The DSWD should ensure adequate social safety nets for more vulnerable populations affected by the lockdown. In addition, the DOLE can also further expand job opportunities available through the TUPAD program. A policy should be created that mandates increased transparency in the allocation and disbursement of these funds.
- 4. Create quarantine facilities and compensate those isolated.** In line with the creation of referral hospitals, the government should look to repurpose buildings to serve as fully-equipped quarantine facilities for the sick and exposed, while also providing the isolated with basic necessities and compensation.
- 5. Ensure that barangay health centers can still function for primary care.** The DOH, in coordination with LGUs, must equip barangay health centers with the necessary equipment, information, and training to still address other health concerns amidst the ongoing pandemic. The DOH and DILG should also collaborate on national guidelines for the response to the COVID-19 pandemic on the level of the local barangay health center.

Conclusion

Because of the increasing number of COVID-19 cases in the country, the Philippine government called for urgent action on mitigation and further containment. However, implementing stringent measures brought about adverse effects on the population's economic and social life. Other countries have demonstrated that effectiveness in managing clusters of outbreak in their country did not have to require major changes but swift, focused, and coordinated action. Hence, recommendations were drawn from their successful experiences in order to help guide further decision-making to solve the ongoing pandemic crisis in the country.

¹⁹ UNDP Seoul Policy Centre for Knowledge Exchange through SDG Partnerships. "Rapid Innovations in Response to COVID-19: Examples from the Republic of Korea", (March 11, 2020) http://www.na.undp.org/content/seoul_policy_center/en/home/library/rapid-innovations-in-response-to-covid-19-examples-from-the-rep.html (accessed on March 18, 2020)

²⁰ Glen MacDonald "Why Vietnam has been the world's number 1 country in dealing with coronavirus", *Chaothanoi*, (March 4, 2020)

²¹ <https://chaothanoi.com/2020/03/04/why-vietnam-has-been-the-number-one-country-in-the-world-on-coronavirus/?cn-reloaded=1> (accessed on March 18, 2020)

²² Ghen Cô Vy | NIOEH x K.HUNG x MIN x ERIK "Washing Hand Song Corona Song" February 2020.. YouTube video. 3:09. Posted February 2020 <https://www.youtube.com/watch?v=BtulL3oArQw>