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Letter to the Editor

To safely reopen after a lockdown, masks are crucial: lessons from Taiwan

We agreed with the comments made by Sergi and Leung on the use of face masks. Currently, the question as to how countries can safely reopen from a lockdown is a key public health issue globally. For a country to safely reopen after a lockdown, lessons from a country who beat Coronavirus disease 2019 (COVID-19) without needing to put a lockdown in place could be valuable. Taiwan was a good example that achieved successful results in limiting the spread of coronavirus. At the time of writing, up to May 20 Taiwan recorded 37 consecutive days without new local COVID-19 cases. Only 440 cases with COVID-19 were diagnosed of which 349 were imported cases, 55 were local cases and 36 were Naval cases. Of the confirmed cases, there have been 7 deaths, and 401 patients have been released from isolation.

One recent study compared face mask use recommendations in different countries. Many important public health management strategies were also implemented in Taiwan to cope with COVID-19. On January 20, 2020, early in the pandemic, the Central Epidemic Command Center (CECC) of Taiwan was activated and a level 2 travel alert for Wuhan was then announced. A level 2 travel alert indicated practice enhanced precautions, be aware of heightened risks to safety and security.

At that time, no COVID-19 cases had been confirmed in Taiwan, but the CECC was started and advised every symptomatic patient to wear face masks. The CECC started a routine daily national press conference to report stockpile levels and the allocation of facemasks. CECC also set up a national toll-free communicable disease reporting and consultation hotline and requisitioned popular TV advertising hours to broadcast repeatedly a 3-min COVID-19 public health education video every day, including instructions on how to correctly wear a surgical mask. On January 22, CECC allocated masks to retailers and set a price limit for each surgical mask at USD $0.20 to avoid jacked up prices and individuals stockpiling masks. The CECC also announced that the spread of fake news regarding the epidemic or face masks wound result in an individual being fined up to USD $100,000. In addition, the export of face masks was prohibited on January 24, 2020 to avoid a shortage. Moreover, mask and its machine manufacturers were requisitioned to boost up their face mask production capacity, which rose from 1.3 million pieces per day to 13 million pieces per day by the end of March 2020. On January 27, the CECC in Taiwan issued a strict regulation requiring that anyone entering any hospital to wear a surgical mask. At that time, only five imported COVID-19 cases had been confirmed in Taiwan. On January 29, this regulation was then further extended to all indoor public spaces, as well as public transportation, after the first local case was confirmed. Drivers on public transportation had the right to refuse passengers without masks to board, and anyone not wearing a mask would be fined if they were observed. The CECC did not suggest any social distancing until April 1. All schools, restaurants, and business activities remained open as usual. On January 30, Taiwan’s High Prosecutors Office started a nationwide campaign to stop profiteering from raised prices on personal protective equipment including masks. The penalty is 1–7 years in jail and a fine of up to USD $167,000. Only 1–3 masks are allowed per purchase at convenience stores, local pharmacies, and medical supply stores. A new name-based rationing system was announced for the purchase of face masks through verification of National Health Insurance cards. Engineers with the Digital Minister developed several apps for the public that enable them to see pharmacies’ mask stock levels.

How is it possible that several waves of community infections were ultimately blocked? Even the cluster of infections onboard the Taiwanese Navy’s Panshi Fast Combat Support Ship did not spread further when infected military personnel had already entered into communities, making contact tracing nearly impossible.

On May 4, the Data Evaluation and Learning for Viral Epidemics Working Group of the Royal Society announced the results of their research on mask efficacy and made recommendations for mask policies for the general public. They suggested that wide use of face masks, including homemade cloth masks, by asymptomatic and presymptomatic patient could reduce onward transmission in places where physical distancing is not possible or predictable.

There have been many studies that demonstrate 40–80% of SARS-CoV-2 infections are asymptomatic, and that viral loads are highest during the presymptomatic and early symptomatic phases. Droplets are the main infection route for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). During the asymptomatic or incubation period, droplet infection is not only spread by coughing or sneezing but also through speech and breathing. Although surgical masks could not completely block virus spread from coughing vigorously, they could still block transmission from talking or breathing. In addition, masks can reduce the dispersion of droplets and even cloth masks can reduce emission of particles by variable amounts. In Europe and the United States, cloth masks have approximately 50% efficiency and made recommendations for mask policies. The penalty is 1–7 years in jail and a fine of up to USD $100,000. In addition, the export of face masks was prohibited on January 24, 2020 to avoid a shortage. Moreover, mask and its machine manufacturers were requisitioned to boost up their face mask production capacity, which rose from 1.3 million pieces per day to 13 million pieces per day by the end of March 2020. On January 27, the CECC in Taiwan issued a strict regulation requiring that anyone entering any hospital to wear a surgical mask. At that time, only five imported COVID-19 cases had been confirmed in Taiwan. On January 29, this regulation was then further extended to all indoor public spaces, as well as public transportation, after the first local case was confirmed. Drivers on public transportation had the right to refuse passengers without masks to board, and anyone not wearing a mask would be fined if they were observed. The CECC did not suggest any social distancing until April 1. All schools, restaurants, and business activities remained open as usual. On January 30, Taiwan’s High Prosecutors Office started a nationwide campaign to stop profiteering from raised prices on personal protective equipment including masks. The penalty is 1–7 years in jail and a fine of up to USD $167,000. Only 1–3 masks are allowed per purchase at convenience stores, local pharmacies, and medical supply stores. A new name-based rationing system was announced for the purchase of face masks through verification of National Health Insurance cards. Engineers with the Digital Minister developed several apps for the public that enable them to see pharmacies’ mask stock levels.

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and ignore other epidemic prevention strategies because they wore masks. A recent study indicated that, in countries that began using masks early, the epidemic curve has been flattened, this includes Taiwan. Other studies used prediction models to suggest that if most citizens wear a mask in public, the transmission rate of the virus (R) can be kept below one and stop the spread of the disease.

European countries and the US will need to remove their lockdowns to restore economic activities sooner or later. When this occurs, in addition to hand hygiene and appropriate social distancing, it is crucial for everyone to wear masks. By doing so, a protective shield can be formed in places where social distancing is difficult, such as cars and elevators. We share our experience in Taiwan and hope the pandemic eases soon.

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