The coronavirus disease 2019 (COVID-19) pandemic has affected countries around the world in an unprecedented way. To flatten the curve, just as an early implementation of nonpharmaceutical interventions lowered the 1918 flu pandemic peak death rate by up to 50% in U.S. cities,1 many countries have implemented national or regional lockdowns and maintained stay-at-home/shelter-in-place orders and social distancing. As lockdowns are extended, people’s patience is reaching the limit (e.g., anti-lockdown protests) in some places.2 Along with concerns about an economic recession, some countries and many U.S. states are now considering reopening borders and removing lockdown restrictions. However, there is a lack of scientific evidence for decision making on when to lift the lockdown safely, given insufficient capabilities for surveillance and rapid response.3 Without enough response preparations and public education on precautionary recommendations, merely resuming the lockdown could be dangerous by renewing the spread of the virus.

Moreover, as the 1918 flu pandemic lasted for 3 years with 4 waves, a recurrent occurrence of wintertime outbreak is projected.4 Experts have also predicted this pandemic will likely keep spreading for up to 2 years, until 60%–70% of the population is infected.5 Because rigorous epidemic investigation based on extensive diagnostic testing was not commonly feasible in the early phase of pandemic, current epidemic statistics on morbidity and mortality (in terms of undiagnosed COVID-19 deaths) are unquestionably underestimated and it is highly likely that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has spread much more in communities. Until a vaccine and effective treatments become available, the public application of infection control principles will be the public’s best strategy to live with the current pandemic situation.

Infection control recommendations at hospital settings are mainly transmission-based (i.e., contact, droplet, and airborne) precautions, along with standard precautions which are recommended for every patient’s care, regardless of the specific disease diagnosis.6 Based on universal precautions and body substance isolations for the emergence of acquired immunodeficiency syndrome in the early 1980s, standard precautions were developed to emphasize the importance of hand hygiene and using personal protective equipment.7 Like the influenza virus, when standard precautions alone do not fully interrupt pathogen transmission, additional droplet precautions are necessary, such as keeping a minimum of 3 feet from the patient (preferably a single room), wearing a mask (when within 6–10 feet for highly virulent emerging pathogens), and maintaining respiratory hygiene/cough etiquette.6
Given the wide spread of highly contagious SARS-CoV-2 in communities and its mainly droplet-transmission mode, these infection control recommendations can be expanded from hospital settings to the public and the public application of droplet precautions along with standard precautions (“COVID-19 precautions”) in daily activities would reduce the spread of COVID-19 after lifting the lockdown.

Most importantly, because masks are inexpensive, simple, and possibly effective (despite sparse and contestable evidence), wearing a mask should be mandatory for everyone for any social contact; from 2 individuals’ small talk to large gatherings; not only for flu-like symptomatic individuals, but for every healthy individual susceptible to this novel virus; and for protecting himself/herself (inward protection) and others (outward protection). The N95 respirator is not recommended for the public’s daily activities; it is recommended for healthcare personnel (HCP) for aerosol-generating procedures. For the general public, any mask covering the mouth and nose fully (e.g., home-made fabric masks or scarves; “alternative masks”) is enough to block droplets which can be generated through talking, sneezing, and coughing. To prevent panic mask buying, mask wearing was discouraged even for hospital visits in the early epidemic phase in the United States; however, it was misguided, because exposure to potentially condensed air with the SARS-CoV-2 virus in crowded breathing spaces inside hospital buildings could be risky. Although masks cannot prevent the inhalation of airborne transmittable small particles as particulate respirators can, mask wearing can be considered the extensive application of respiratory hygiene/cough etiquette to block the shedding of infectious droplets (outward) and to protect the mucous membranes of the mouth and nose from droplet exposures (inward). Therefore, public precautionary mask wearing should not be discouraged with the reason of no clear guidelines for fabric mask use, reuse, storage, and reprocessing.

Some Americans protested, “No mask, my body, my choice,” but they may not understand the importance of mask wearing and the potentially severe impact of COVID-19 on others; freedom can be guaranteed only alongside survival. Therefore, through effective crisis communication, public health authorities must recommend COVID-19 precautions to the public to enlighten them with the importance of everyone’s compliance to combat the pandemic. As a historical example, San Francisco passed a law on wearing gauze masks in October 1918 to halt the spread of the 1918 flu pandemic. Because mask wearing/hand hygiene is seemingly simple, many people easily think they already know how to don/doff masks correctly. However, some people often wear masks incorrectly (e.g., partially exposed or making holes in the mask to breathe easily). Therefore, more public messaging and emphasis on the importance of correct mask wearing is necessary, but not a replacement for social distancing.

Along with mask wearing, frequent hand hygiene should be strongly recommended, because people often touch their faces unconsciously. The droplets containing the SARS-CoV-2 virus can sit on any surface; fomite transmission can occur through high-touch surfaces, such as elevator buttons, doorknobs, and shopping cart handles. Therefore, avoiding direct contact (e.g., using disposable gloves) or the frequent cleaning/disinfection of high-touch surfaces using Environmental Protection Agency-registered disinfectants could help reduce transmissions.

When hospitals have infection outbreaks, sometimes the outbreak investigation process itself resolves the outbreak, because all HCP comply with infection control precautions again, as
successful outbreak control in hospital settings always requires each member's collaboration. Korea’s absence of any new cases from its National Assembly election, in which over 30 million participating voters wore masks and vinyl gloves and waited in the line at least 1 meter apart, can be a promising example that we can lift lockdowns safely by compliance with precautions. Global and government leadership for health authorities’ investigations and clear communication to the public, emphasizing every citizen’s collaboration for COVID-19 precautions, can be our best bet to fight the highly contagious pandemic.

REFERENCES


