

## Taking the right measures to control COVID-19



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The outbreak of coronavirus disease 2019 (COVID-19), which originated in Wuhan, China, in December, 2019, has been declared a public health emergency of international concern by WHO.<sup>1</sup> By March 2, 2020, 80 026 confirmed cases had been reported in China, causing 2009 deaths, and the epidemic had spread to 25 countries around the world.<sup>2</sup> On Jan 20, 2020, China declared the disease a second-class infectious disease but has introduced management measures for a first-class infectious disease (considered the most dangerous category of infection). Most areas of the country have adopted public health first-level response measures (considered the highest level of response). In the face of the rapidly spreading disease and a large number of infected people, there is an urgent need for effective infection prevention and control measures. However, some of the measures that have been introduced have no scientific basis and have proven to be ineffective.

First, although COVID-19 is spread by the airborne route, air disinfection of cities and communities is not known to be effective for disease control and needs to be stopped. The widespread practice of spraying disinfectant and alcohol in the sky, on roads, vehicles, and personnel has no value; moreover, large quantities of alcohol and disinfectant are potentially harmful to humans and should be avoided.<sup>3,4</sup>

Second, in the use of personal protective equipment, we should try to distinguish different risk factors, adopt different epidemic prevention measures, and reduce the waste of personal protective equipment, as these resources are already in short supply. Although surgical masks are in widespread use by the general population, there is no evidence that these masks prevent the acquisition of COVID-19, although they might slightly reduce the spread from an infected patient. High-filtration masks such as N95 masks and protective clothing (goggles and gowns) should be used in hospitals where health-care workers are in direct contact with infected patients.<sup>5</sup>

Third, the practice of blocking traffic and lockdown of villages is of no value for the prevention and control of COVID-19. Since the outbreak of COVID-19, some countries have suspended flights to and from China, and prevented Chinese people from travelling

to their countries; both of these actions violate WHO International Health Regulations.<sup>6</sup> Similarly, in community prevention and control of the disease, the measures taken by individual villages and communities to seal off roads are of no value.<sup>7</sup> Such measures could result in civil unrest and reduce compliance with infection prevention and control advice.

Fourth, public health education must be based on scientific evidence to reduce the anxiety and distress caused by misinformation. In particular, epidemiological findings need to be reported in a timely and objective manner so that they can be accurately assessed and interpreted. The risk of transmission with brief contact (less than 15 min face-to-face contact) or infection onset after 14 days of exposure to a known infected person (the estimated maximum incubation period) is low and should not be over-exaggerated. Misinformation spreads panic among the general population and is not conducive to implementation of epidemic control measures.<sup>8</sup>

Fifth, WHO has made it clear that there are currently no known effective treatments for COVID-19 and does not recommend the use of antiviral drugs, antibiotics, glucocorticoids, or traditional Chinese medicine. Despite this, there have been reports of the use of oseltamivir, lopinavir/ritonavir, prednisone, antibiotics, and traditional Chinese medicine for the treatment of patients with COVID-19.<sup>9</sup> Care should be taken to not give patients drugs of unknown efficacy, which might be detrimental to critically ill patients with COVID-19; clinical trials are urgently required in this context.<sup>10</sup> Likewise, the development of a vaccine is an urgent public health priority.

COVID-19 is an emerging infectious disease of global public health concern. Efforts to control the COVID-19 epidemic are likely to require an evidence-based, multifactorial approach. First, there is a need to limit human-to-human transmission, including reducing secondary infections among close contacts and health-care workers, preventing transmission amplification events, and preventing further international spread. Second, there is a need to rapidly identify, isolate, and provide optimised care for patients. Third, we need to identify and reduce transmission from the animal source or sources. Fourth, we need to address

crucial uncertainties such as clinical severity, extent of transmission and infection, and treatment options, and accelerate the development of diagnostics, therapeutics, and vaccines. We also need to minimise social disruption and economic impact through international, collaborative and multisectoral approaches. Most importantly, we need to communicate the epidemiology and risks of COVID-19 clearly, both to health-care workers and to the general population, and to implement infection prevention and control measures that are based on sound scientific principles.

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