Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

distancing interventions, including nationwide school closures and cancellation of public gatherings, was associated with a 30% reduction in the transmission rate.[10] However, it increased after the mandatory school suspension resumed and before summer vacation started.[10] Given the uncertainties surrounding the extent of the COVID-19 pandemic across the country, efforts to sustain online learning and remote working in combination with enhanced infection control measures in health-care settings and nursing homes could aid in mitigating the spread of the virus and gaining control of the epidemic's chains of transmission.

In the USA, past influenza pandemics have spread as a series of waves of varying durations and intensities, which have been associated with seasons and school cycles.[10,11] Because respiratory viruses, including other coronaviruses, are known to respond to seasonal variation,[12] we might expect that increasing temperatures in the summer could reduce the intrinsic transmissibility of the novel coronavirus to some extent. In the context of a novel virus, warmer weather alone is unlikely to sufficiently mitigate the transmission rate and interrupt community transmission in the absence of social distancing strategies. Perhaps the most reasonable scenario ahead of us is that the transmission rate will decline during the next few months, partly driven by social distancing measures, a scenario that is reminiscent of the influenza 2009 A/H1N1 pandemic.[10] Close monitoring of the transmission potential of the virus on the basis of reliable and publicly available data in near real-time will be key to short-term forecasts and sound public health decisions.

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Preparedness is essential for malaria-endemic regions during the COVID-19 pandemic

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For the Chinese translation see Online for appendix

The coronavirus disease 2019 (COVID-19) pandemic that first emerged in Wuhan in China's Hubei province[1] has quickly spread to the rest of China and many other countries. Within 3 months, more than 125 000 people have been infected and the death toll had reached over 4600 worldwide on March 12, 2020.[2] In an attempt to contain the virus, the Chinese Government has made unprecedented efforts and invested enormous resources and these containment efforts have stemmed the spread of the disease.[3] As of March 12, 2020, malaria-endemic regions in Africa have reported a few imported COVID-19 cases including in Nigeria, Senegal, and the Democratic Republic of the Congo.[2] Africa needs to be prepared

to deal with COVID-19, given the infectious potential of the disease and its capacity to undermine malaria control efforts.[4] In addition to the shared vigilance that countries around the world should maintain, regions need to consider their local malaria epidemic and take additional measures for preparation.

There are relevant lessons from the 2014–16 outbreak of Ebola virus disease in west Africa. The emergence of Ebola in malaria-endemic countries, including Guinea, Liberia, and Sierra Leone, led to a public health emergency and dealt a heavy blow to malaria control efforts. In Guinea alone, an estimated 74 000 fewer malaria cases than expected were seen at health facilities compared with years without Ebola because of decreases in the number of patients with malaria seeking appropriate health care and the volume of malaria treatments being dispensed.[5] Contributing factors to this situation were the close resemblance of early Ebola symptoms with malaria, leading to difficulties in early diagnosis, and the fear on the part of community members of contracting Ebola in the health-care facilities. As Ebola overwhelmed health-care infrastructure, insufficient resources for malaria control in these regions led to increased mortality and morbidity. In Guinea, the official number of reported deaths from malaria in 2014 was 1067 (WHO estimate 9428) compared with 108 reported in 2013, and there were 2446 deaths from Ebola virus disease in 2014.[6] More alarmingly, it was estimated that there were about 7000 additional malaria-associated deaths among children younger than 5 years in Guinea, Liberia, and Sierra Leone due to the Ebola outbreak.[7] There is, therefore, a real and pressing danger for malaria-endemic regions when faced with the threat of a novel infectious disease outbreak.

While our knowledge of COVID-19 is still developing, it is a highly contagious disease that is thought to spread primarily from human to human through direct contact and inhalation of respiratory droplets. Carriers with mild or no symptoms can probably transmit the virus.[8] In addition to China, Italy, Iran, and South Korea are among the countries with local outbreaks that could be exporting the disease and increasing exposure risks. With Africa's increasing global connectivity, the unfortunate likelihood of a continental outbreak cannot be ruled out.[9] Much like Ebola, the early symptoms of COVID-19, including

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fever, myalgia, and fatigue, might be confused with malaria and lead to challenges in early clinical diagnosis.[1] These features of COVID-19 and the previous experiences of the Ebola outbreak point to the need for malaria-endemic countries to consider preventive measures against not only the COVID-19 threat but also its likely impact on existing malaria control efforts. The containment efforts and research impetus being taken by China and other affected countries have bought valuable time for the rest of the world, and this time window should be used effectively by vulnerable regions.

WHO is monitoring the fast-evolving situation of the COVID-19 epidemic and needs to advise the countries in the malaria-endemic regions on how to establish and effectively execute public health policies. Preventive measures for COVID-19, including case and contact tracing, quarantine and screening, as well as education to encourage good hand hygiene practices, should be in place. Additional and pre-emptive measures must be taken for malaria control in these countries, anticipating the potential challenge that would be faced by the public health system during an outbreak of COVID-19. In the case of Ebola, it was estimated that malaria cases in Guinea, Liberia, and Sierra Leone could have increased by up to 1 million in 2014 as a result of a cessation of distribution of insecticide-treated bednets (ITNs).[10] Governments and health leaders in malaria-endemic regions must ensure that such stresses to medical infrastructure are minimised in the event of an outbreak of COVID-19. Resource allocation should

be optimised whenever possible to ensure minimal disruption to malaria control should COVID-19 management become necessary. Management of medical supplies and stockpiling of surgical masks and other protective equipment should be done in advance and medical staff should be adequately trained in their use. In cases of emergency, mass drug administration and the distribution of ITNs might be considered for short-term malaria relief in hyperendemic areas. Such measures would also aid efforts in COVID-19 management by reducing the strain on medical resources and minimising confounding factors in diagnosis. Previous successful implementation of such measures occurred during Ebola outbreaks in Sierra Leone in 2014–15 and in the Democratic Republic of the Congo in 2018, in accordance with WHO guidelines.[11,12] In malaria-endemic regions, malaria diagnostics should be systematically added to fever management, including for suspected cases of COVID-19, and health-care facilities should be well stocked with artemisinin combination therapy drugs. Infection management protocols, such as social distancing, mask-wearing, and prompt seeking of diagnostic testing and necessary treatment, should be communicated in advance. These measures will require collective political will and unity in a coordinated effort by African countries.

Although an outbreak of COVID-19 in malaria-endemic regions might not happen, we must nevertheless advocate caution and recognise that such pre-emptive measures are ultimately worthwhile. Preparedness is the key to navigating any public health crisis, and malaria-endemic countries must be prepared for the challenges that COVID-19 might bring while minimising disruption to malaria control.

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Mass gathering events and reducing further global spread of COVID-19: a political and public health dilemma

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The coronavirus disease 2019 (COVID-19) pandemic[1] presents countries with major political, scientific, and public health challenges. Pandemic preparedness and reducing risk of global spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are key concerns. Mass gathering (MG) events[2] pose considerable public health challenges to health authorities and governments. Historically, sporting, religious, music, and other MGs have been the source of infectious diseases that have spread globally.[3] However, the scale of the problem has declined over the years as better public health measures have been implemented