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.

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The challenges of enhancing global preparedness in response to the impending Omicron pandemic

KEYWORDS
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Dear Editor,

Since the discovery of COVID-19 and the causative SARS-CoV-2 in China in December 2019, its spread has continued relentlessly leading to a cumulative toll of over 26 million and mortality exceeding 5 million (https://covid19.who.int/). With hindsight, the world has learned that SARS-CoV-2 epidemiology is punctuated by repeated emergences of variants, with Delta originating in India taking on as the dominant strain during 2021.[1] On 24 November 2021, South Africa reported to the World Health Organization that a new variant B.1.1.529, subsequently named as Omicron, has been discovered.[2] In the one-week period that followed, almost 300 Omicron cases were reportedly detected in over 30 countries/territories outside South Africa (Fig. 1) (data from multiple media sources, https://bit.ly/3EQ3wW9). While a majority of these cases were imported, non-import cases were also detected signifying the occurrence of transmissions outside South Africa. The newly reported Omicron cases included previously SARS-CoV-2 infected patients, people who had received full course of vaccination or even a booster dose of the vaccine. While South Africa was referred as the "source" country, there were reports of Omicron cases linked with a history of exposure in other countries — Namibia, Ethiopia, Nigeria, the Netherlands and Peru. Worldwide transmission of Omicron has evidently taken place already in early November or October 2021.

The emergence of Omicron poses unprecedented challenges unlike those confronted at the discovery of the earlier variants. With over 30 mutations identified,[3] Omicron is behaving like a novel virus than a slowly evolving SARS-CoV-2 strain. Its efficiency of transmission can be inferred from the infection of one person who stayed in a closed room on the same floor of a quarantine hotel as that of an index case subsequently diagnosed with the infection in Hong Kong.[4] Surveillance data suggested that Omicron is replacing Delta as the dominant SARS-CoV-2 strain in heralding a fourth epidemic wave in South Africa (https://www.gisaid.org/hcov19-variants/). The exposure of people to Omicron at gatherings in Scotland, USA, Portugal reported in the media will soon prove that outbreaks have rapidly occurred in the 2-week period after the variant was named. Recent research showed that Omicron had evaded human immunity such that previous infection did not prevent one from re-infection,[5] while newer generations of variants were less likely to be protected from the currently available vaccines.

The impending Omicron outbreaks called for concerted global efforts in achieving effective epidemic control. In the two-year period since the onset of the COVID-19 pandemic, the world had witnessed the execution of major public health interventions ranging from travel restriction, quarantine and isolation, social distancing regulations to vaccination. Unfortunately, the scale of implementation of these interventions varied geographically, as a result of differences in national priorities, resource limitation and inequity. While the Omicron variant may cause less morbidity compared to its predecessor, a high proportion of the global population is vulnerable to the infection. Unless and until a united front is formed, SARS-

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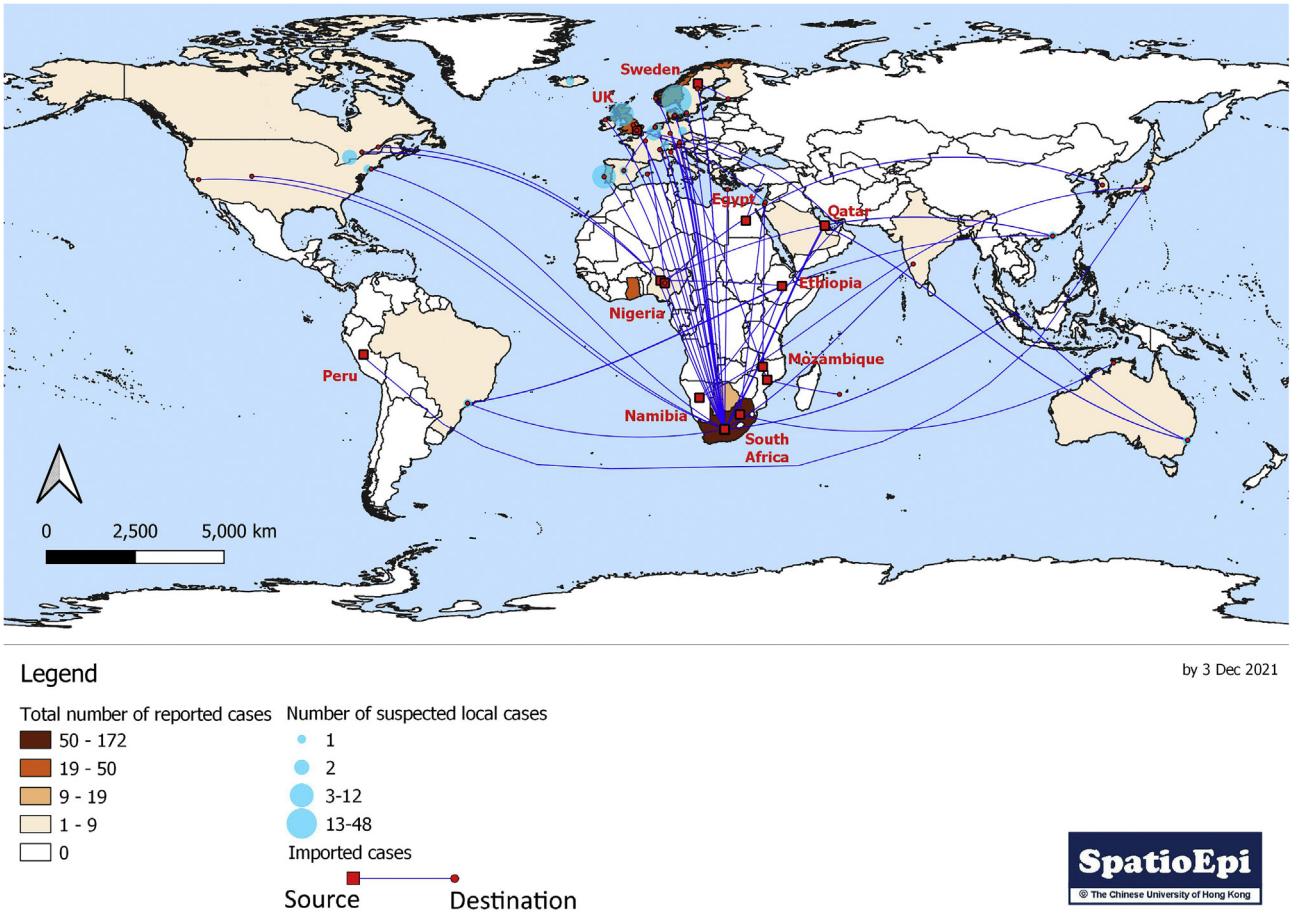

Figure 1. Reports of the detection SARS-CoV-2 Omicron variants in the one week period after South Africa's initial report to the World Health Organization on 24 November 2021.

CoV-2 threats would continue with the growth of Omicron and emergence of newer variants in the coming years.

Declaration of competing interest

The authors declare that there is no competing interest.

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