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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COVID-19 vaccine: what are we doing and what should we do?

Vaccines are the most important weapon for preventing infections and fighting the COVID-19 pandemic. It is now well established that vaccines lose effectiveness over time. For this reason, health authorities and drug regulatory agencies in several countries have approved the administration of an additional dose of vaccine (called a booster) to individuals 3–5 months after the completion of the vaccination cycle. This approach appears to be effective in maintaining immunity against SARS-CoV-2.[1]

In *The Lancet Infectious Diseases*, Giovanni Corrao and colleagues published the results of a real-world study that examined the infection rate of more than 5 000 000 vaccinated individuals with a follow-up of 9 months.[2] This study confirms data already available for shorter follow-up periods, which showed a decrease in protection against infection that increased with time since the second dose of vaccine.[2] However, they documented that protection against severe forms of COVID-19 remained, albeit attenuated, with both adenoviral and mRNA vector vaccines.[2] What conclusions can be drawn from this information? First, it is extremely important to continue the vaccination campaign in people who do not yet have vaccine protection, especially if they are at risk of developing severe forms of the disease (elderly, frail, immunocompromised, and people with comorbidities).[3] It is therefore necessary to ascertain the main factors that lead these high-risk individuals to not be vaccinated. Vaccine hesitancy is certainly the most important and is due, first, to the media overemphasising the protests of vaccination opponents and the alleged serious side-effects of vaccines, and second, to the spectacularisation of scientific information on COVID-19, which has led to appointed experts spreading contradictory opinions and messages and the public losing confidence in science.[4] Second, with the emergence of new highly contagious variants such as the omicron variant (B.1.1.529), it seems necessary to encourage the administration of booster doses to high-risk individuals 3–5 months after the second dose and to vaccinate all individuals aged 5 years and older who have not yet received the first dose. The loss of protection against infection by the vaccines and the emergence of the highly transmissible variants prevent the vaccine alone from controlling the pandemic. Hygienic and social distancing measures (frequent hand washing, avoiding physical contact as much as possible, wearing a face mask indoors) and other nonpharmacological measures must be combined with the vaccination strategy.[5]

Three hypotheses have been proposed to explain the occurrence of the omicron variant, which differs in several respects (about 30 mutations) from the other variants of SARS-CoV-2. The first is that it evolved in an immunocompromised human chronically infected with SARS-CoV-2, the second that it evolved in an area of the world where viral sequencing is absent or infrequent, and the third that it evolved in an animal reservoir before a spillover to humans.[6] Regardless of the correct hypothesis, the lesson is the same: countries with high numbers of immunocompromised people, where tracing of variants is rarely done, and where contact with animals potentially susceptible to coronaviruses is possible, need to be quickly involved in vaccination campaigns. Africa is a huge continent that has all these characteristics and at the same time has a very low vaccination rate. We cannot think of getting out of the pandemic emergency if we do not include Africa and all developing countries in a

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capillary vaccination campaign to prevent the emergence and spread of further and more dangerous variants that can evade both natural and vaccine-triggered immune responses and have higher mortality.[7] The scenario of a variant that is similarly transmissible to the omicron variant and has high mortality would be catastrophic and must be avoided at all costs. However, it is important to consider that even an increase in transmissibility with no change in lethality or hospitalisation rates could lead to the collapse of hospital emergency departments and health-care systems and an exceptionally high number of deaths. Moreover, promising and effective new therapies cannot yet have a substantial effect because they are scarce, expensive, and unlikely to have a measurable effect in the short term.[8] The fight against the virus must be waged on numerous open fronts: aggressive global vaccination campaigns (while also considering extending mandatory vaccination from some categories to the entire population), nonpharmacological interventions, strengthening emergency and critical care systems, and finding therapies that are effective at every stage of the disease. The road to normality is still very long.

I declare no competing interests.

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Movement dynamics: reduced dengue cases during the COVID-19 pandemic

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Dengue, a systemic viral infection caused by dengue virus, continues to be a public health problem in countries in which it is endemic, such as Indonesia, even during the COVID-19 pandemic, resulting in a double burden of disease.[1] During 2020 and 2021, there appeared to be a decrease from previous years in the total number of dengue cases reported to WHO, although the data for this period are not complete.[2] COVID-19 was first identified in early 2020, and by the end of that year, there were around 80 million COVID-19 cases across the globe.[3] As COVID-19 cases continued to rise, governments in affected countries implemented mobility restrictions to suppress the rate of SARS-CoV-2 transmission, leading to behavioural changes that might also affect transmission of other infectious diseases circulating the community. In *The Lancet Infectious Diseases*, Yuyang Chen and colleagues[4] compared the annual 2020 incidence of dengue in 23 countries in Latin America and southeast Asia against a Bayesian regression model that projects a predicted incidence of dengue based on the monthly incidence, climatic, and population variables in each country in 2014–19. Deviations in these incidences were then assessed for any association with specific COVID-19-related public health and societal measures and human movement behaviours.

The intensity levels and forms of mobility restrictions varied geographically across different countries and temporally throughout the months of 2020, providing a unique opportunity to analyse these variables in how they affect transmission in infectious diseases other than COVID-19, such as dengue. In most countries included by Chen and colleagues,[4] the intensity of public health and societal measures and human movement behaviours were highest in the beginning of the COVID-19 pandemic, and then waned over the months as the epidemic curve flattened and economic pressure to loosen restrictions increased. Indonesia is a dengue endemic country that was heavily affected by COVID-19 in 2020. The government imposed a restriction policy in early March, 2020 that was not a full lockdown, but instead a compromise between transmission control and economic considerations, called large-scale social restriction, which