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.

vaccine's efficacy for peer review has raised more questions than answers.

Emergency-use authorisation can be given only after confirmation of safety and efficacy in a phase 3 clinical study that is usually designed and conducted to meet requirements of subject-expert committees and regulatory authorities. In exceptional circumstances, approval might be considered when the ongoing trial is based on strong evidence of safety and efficacy.

It is difficult to understand the term restricted use when applied to vaccines, as it is ordinarily applicable to drugs. Even greater confusion arises with use of the phrase clinical trial mode since its meaning is ambiguous. It is understood that clinical trials are yet to be completed and need consent and follow-up. It is unclear which factors will guide the selection of individuals for vaccination. In clinical trials, volunteers are usually not aware of whether they have been given the vaccine or a placebo.[2]

India's innovation in vaccine development might be considered a giant leap and source of pride for its scientists, but there is a need to clear the air and gather public trust through transparency. When public trust in an indigenous vaccine is low, manufacturers, their academic partners, and regulators must disclose protocols and results data. Lack of desirable diligence and conscientiousness in conducting confirmatory clinical trials is a matter of concern for citizens. Once public trust in Covaxin is compromised through the public media, it is difficult to revive. This distrust in the vaccine can fuel apprehension and lead to a vaccine-hesitancy chain reaction, which could contribute to resurgences in the virus and lack of control of the pandemic.

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See Online for appendix

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Seroprevalence of anti-SARS-CoV-2 antibodies after the second pandemic peak

After the first pandemic wave in Europe, seroprevalence surveys revealed that roughly one in ten individuals had been infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[1] Our Geneva-based seroprevalence study revealed that infections were less common in young children (<9 years) than in older children and adults, but at the time of the study individuals were confined and schools were closed.[2] Since autumn, 2020, Europe has experienced a rapid increase in reported infections, with SARS-CoV-2 incidence in some countries largely surpassing that of the first wave. Due to changes in test availability, policy, and care-seeking behaviours, it is unclear how to compare current case reports with the first wave and how these relate to undetected infection rates.

To estimate SARS-CoV-2 seroprevalence in the general population and determine whether age disparities have persisted through the second wave, we repeated a representative serosurvey of the Geneva population using a stratified random sample (based on age, sex, and education level) of individuals aged 18–64 years from our previous study[2] and an independent random sample of individuals aged 0–18 years and 65 years and older who were identified from resident registers of the Swiss Federal Office of Statistics. We tested participants for anti-SARS-CoV-2 total immunoglobulins targeting the spike protein (Elecsys anti-SARS-CoV-2 S; Roche Diagnostics, Rotkreuz, Switzerland) following manufacturer's recommendations (≥0·8 U/mL considered seropositive). We used a previously published Bayesian model accounting for household clustering, test performance, and age distribution in the Geneva population.[2]

Between Nov 23, and Dec 23, 2020, we recruited 4000 participants aged 0–96 years (53·4% women; 25·4% <18 years), of whom 820 were seropositive, yielding a seroprevalence of 21·1% (95% credible interval [CrI] 19·2–23·1). We found similar seroprevalence among men and women, but large differences across age groups (appendix p 2). Compared with adults aged 25–34 years, children aged 6 years and older and adolescents had similar seroprevalence, whereas children aged 0–5 years were 43% less likely to be seropositive, and adults aged 65–74 years and those aged 75 years and older were 42% and 64% less likely to be seropositive, respectively (appendix p 2). We estimated that each virologically confirmed SARS-CoV-2 infection represented 2·7 infections (95% CrI 2·3–3·1; appendix pp 3–5) in the community, substantially lower than in the first wave (11·6),[2] probably due to changed testing practices.

Despite seroprevalence doubling in Geneva since the end of the first wave, most of the population remains unexposed, including more than 90% of adults aged 75 years and older, who have very high mortality risk.[3,4] Although children aged 6 years and older have a similar infection risk as adults, younger children have a lower infection risk. These results should inform policy-makers worldwide,

reinforcing the need for continuous measures to contain SARS-CoV-2 spread, despite growing pandemic fatigue in the population,[5] and to avoid potentially catastrophic COVID-19-related hospitalisations and deaths in the critical months ahead.

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Long COVID: tackling a multifaceted condition requires a multidisciplinary approach

In their Comment,[1] Dana Yelin and colleagues highlight the persistent, heterogeneous, and recurring symptoms of long COVID. A *Lancet* Editorial[2] asks for better research and care to avoid years of struggle for individuals with long COVID. We write following an international, multistakeholder forum, in which peoples' voices were central, to expand the call to action and to identify how we can prevent long COVID from becoming the long-lasting legacy of COVID-19.

On Dec 9–10, 2020, the International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC), the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R) research funders group, and Long COVID Support, a global patient group, held the Long COVID Forum (appendix pp 1–2). We brought together people living with long COVID, interdisciplinary researchers, funders, public health experts, and policy makers, including WHO, in a global public forum to identify research gaps to inform urgent long COVID research and support priorities.

Our discussions, introduced by WHO Director-General Tedros Adhanom Ghebreyesus, were built around three people-centred themes, identified by long COVID support groups: recognition, research, and rehabilitation. We heard from people living with long COVID from around the world, who asked: what is causing my illness? What can I do to recover? Why do I have long COVID when others recover quickly? How do I convince my doctor that what I am suffering from is real? How can others be prevented from getting long COVID? We explored existing evidence,[3] including the recently funded research portfolio on long COVID that will contribute to the evidence body in the short to mid-term[4] and updates from ongoing research from around the world. A complex, multifaceted condition involving a range of physical, cognitive, and psychological symptoms was described, affecting adults and children in different settings, with occupational, economic, and social implications. Such complexity requires a multidisciplinary, globally coordinated approach that supports harmonised, large-scale studies that have the power to provide robust evidence to inform policy and patient-centred care and support to improve long COVID outcomes.

The structure of the forum facilitated the identification of research gaps (appendix p 3). The core message was the need to expand research beyond hospitalised patients to include those who experienced COVID-19 in the community, children, vulnerable communities, and resource-constrained populations to improve equity in access to research and reduce health inequalities.

CH is living with long COVID and is a founder of the Long Covid Support Group. JCS reports experiencing persisting symptoms of COVID-19, following suspected COVID-19 in March, 2020. All other authors declare no competing interests.

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