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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to gather a consensus from several clinical trials and other studies on the titre required for protection.

Although the correlate of protection against SARS-2-CoV has not yet been unequivocally defined, antibodies are likely to be at least part of the protective response. The effect of new variants on the evaluation of antibodies is obvious and unequivocal comparisons are required. Reporting the immunological responses from vaccine clinical trials against the International Standard is essential for the evaluation of clinical data submitted to national regulatory authorities as well as to WHO for emergency use listing, especially as placebo-controlled efficacy studies become operationally unfeasible. There will be a substantial effect on the use of the International Standard if regulatory authorities worldwide request data in IU/mL or BAU/mL. We also encourage journal editors and peer reviewers to ensure that the international standard is used as the benchmark in publications and that data from serology assays are reported in International Standard units.

We declare no competing interests.

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See Online for appendix

For **WHO data on COVID-19 cases** see https://covid19.who.int/WHO-COVID-19-global-table-data.csv

See Online for appendix

COVID-19 vaccines in high-risk ethnic groups

Black, Asian, and minority ethnic communities worldwide have a disproportionate risk of severe COVID-19. In the UK, as of May 19, 2020, 36% of critically ill patients with COVID-19 requiring intensive care were from Black, Asian, or minority ethnic groups.[1] According to Public Health England, the mortality risk from COVID-19, after accounting for sex, age, deprivation score, and geographical region, is double in Bangladeshi people and up to 50% higher in Black and south Asian people compared with White British people.[1] This finding contrasts with age-adjusted all-cause mortality from previous years, which was lower in Asian and Black people than in White British people.[1] These data imply that COVID-19 has more serious effects in Black and Asian people.

The ethnic groups most affected by COVID-19 are under-represented in the COVID-19 vaccine trial data published so far. Despite efforts to encourage participation from Black, Asian, and minority ethnic groups, of the 552 participants in the phase 2/3 Oxford–AstraZeneca trial (based in Southampton and Oxford, UK), only one participant was Black and 19 were Asian.[2] Large-scale trials also have a smaller proportion of minority groups compared with the populations sampled (appendix).[3-5]

Black, Asian, and minority ethnic individuals are under-represented in research. However, the ongoing pandemic necessitates that access to trials and vaccinations shifts from being equal to being equitable. Study recruitment and participation designs should improve diversity in ethnic groups to maximise the validity of results to the populations concerned. Age and sex are routinely considered in recruitment design—the same should now apply to ethnicity.

In the context of a pandemic that has higher infection and mortality risks in certain ethnic groups, it is important that these specific groups are adequately represented in vaccine trials to evaluate both immunogenicity and efficacy.

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New COVID-19 resurgence in the WHO Eastern Mediterranean region

After 7 weeks of falling numbers of COVID-19 cases, a global upsurge was reported during the week of Feb 22, 2021. This case resurgence was observed earlier in the WHO Eastern Mediterranean region, where, between Jan 30 and Feb 26, 2021, the number of weekly cases increased from 158 004 to 207 424 (31%; appendix).

Multiple factors might have contributed to the increase. These factors include changes in testing capacity or strategy, increased transmission associated with mass gatherings, easing of, or decreased

adherence to, public health and social measures, and increased viral transmissibility.

In the Eastern Mediterranean region, the weekly number of tests increased by 4% during the same period, but no major changes were observed in testing strategies, no major mass gatherings were organised, and the number of public health and social measures actually increased. Therefore, the increased case numbers could have resulted from decreased adherence to public health and social measures and SARS-CoV-2 variants of concern, which are more transmissible than the originally identified virus.[1]

Adherence to public health and social measures is reflected in mobility data. According to Google Community Mobility Reports, since mid-January, 2021, visits to retail and recreational places have reduced by only 3–15% on average compared with the pre-pandemic period.

SARS-CoV-2 variants of concern have been reported in 13 countries in the Eastern Mediterranean region (B.1.1.7 in all; B.1.351 and B.1.1.28 in the United Arab Emirates). The WHO COVID-19 dashboard shows that, by the end of February, 2021, the effective reproduction number was 1 or more in these countries. Mathematical models taking into account the circulation of variants of concern forecast a continuing increase in cases, with a new peak in April to May, 2021 (unpublished).

As of March 2, 2021, 14 countries in the Eastern Mediterranean region have started COVID-19 vaccine roll-outs. However, vaccination coverage is still low, with only three countries (ie, Bahrain, Morocco, and the United Arab Emirates) reporting more than ten doses per 100 inhabitants.

The increase in COVID-19 cases is worrying. In most countries in the Eastern Mediterranean region, the effect of vaccination will not be observed for several months. The spread of SARS-CoV-2 will not be contained without effective coordination among WHO, its member states, and its partners, stronger community engagement, enforcement of, and adherence to, public health and social measures, rapid detection and isolation of patients with COVID-19 (particularly those infected with variants of concern), and systematic tracing and quarantine of case contacts. Special attention must be paid to the many countries affected by fragility, conflict, and violence.

Moreover, the COVID-19 response, including public health and socio-economic decisions, needs to be evidence-based and informed by robust, disaggregated data. Improvements in COVID-19 data collection and analysis, including data sharing with WHO and relevant stakeholders, remains a major priority of the pandemic response in the Eastern Mediterranean region and globally.[2]

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Leveraging data and new digital tools to prepare for the next pandemic

The COVID-19 pandemic has accelerated the pace of digital innovation, in part thanks to unprecedented private–public and private–private collaborations. The pandemic has promoted collaboration between inventive and influential companies, universities, and public organisations. These institutions have worked together in vaccine development, in forecasting the spread of infection, and in sharing technology to build public health apps for general use. We must now build on this ability to work across boundaries to deliver results, not return to old silos. As a society, we can change how we prepare for future health emergencies in a way that is more effective, less expensive, and equitably benefits more people and communities globally

New perspectives can be encouraged by hosting competitive public challenges to incentivise and reward the best ideas in digital and data analytics from anyone, anywhere; by fostering collaboration among our coalition of cross-sectoral leaders in technology and health to address tough global health questions; and by promoting a better data ecosystem—one that can contribute to long-term health and economic benefits.

There are emergent and powerful digital and analytical tools that can advance both access to health care and the quality of care received. Yet the wider adoption of these tools is too slow. We need new datasets that are more broad than those typically held in the public sector, including data on knowledge, attitudes, and behaviours, and new models that encourage cross-sector collaborations with research, business, the social sector, and governments.

We fear that attention from leaders in government and business will wane when the moment of crisis passes. We must act fast to embed the changes we need while pandemic preparedness remains on top of everybody's agenda.

In 2020, motivated by these challenges in the midst of the COVID-19 pandemic, the Trinity Challenge was established by a committed coalition of more than 20 founding members from academia, business, and philanthropy. The initiative works to improve how the

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For the **WHO database on COVID-19 public health and social measures** see https://www.who.int/emergencies/diseases/novel-coronavirus-2019/phsm

For **Google Community Mobility Reports** see https://www.google.com/covid19/mobility/

For the **WHO COVID-19 dashboard** see https://tinyurl.com/ygmcbhqc

For the **COVID-19 vaccination coverage tracker** see https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/

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For more on the **Trinity Challenge** see https://thetrinitychallenge.org