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.

their fathers, some from their mothers, inevitably leaving them vulnerable and fragile whereever they find refuge.[3] Ukraine's cold weather conditions will undoubtedly deepen the trauma. Save the Children have reported that even children moved to safety are experiencing poverty, hunger, and mental health challenges.[4] We urge health bodies to strengthen their efforts to protect the mental health of Ukraine's children.

See Online for appendix

The impact of the crisis extends beyond Ukraine. Ukraine exports a substantial amount of wheat and energy (via Russia). Global grain and energy prices have already risen sharply, with the cost of wheat predicted to rise by 50% in some countries.[5] In countries already facing multilevel crises, such as Yemen, Syria, and Lebanon, the resulting depletion of these valuable resources will exacerbate the crises and further jeopardise the mental heath of their young children.[6] Decision makers must strengthen their efforts to end the conflict.

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SARS-CoV-2 nucleic acid testing is China's key pillar of COVID-19 containment

WHO states that timely and accurate diagnostic testing is an essential tool in preventing and controlling the spread of COVID-19.[1] With a huge and densely distributed population, China developed a national SARS-CoV-2 nucleic acid testing strategy that has had a pivotal role in containing COVID-19. This strategy involved border entry screening, inpatient screening, rapid screening in fever clinics, and mass screening of the population in an epidemic area.[2]

China began developing SARS-CoV-2 nucleic acid detection kits soon after the initial outbreak of COVID-19 in Wuhan at the end of 2019. By Jan 31, 2020, the National Medical Products Administration urgently approved six nucleic acid detection kits, and post-market evaluation with a multicentre clinical trial was completed by professional institutions by the end of February, 2020. The sensitivity of these kits was 55·3–95·7%, the specificity above 98% (unpublished).

A national nucleic acid amplification testing (NAAT) laboratory network was also quickly established. NAAT laboratories have been in development across China for decades; thousands of NAAT laboratories for detecting infectious agents such as hepatitis B virus, hepatitis C virus, and HIV are established in large hospitals, blood centres, and in the Chinese Centres for Disease Control and Prevention. As of Feb 14, 2022, 12 777 NAAT laboratories (four times more than at the beginning of the COVID-19 pandemic) provide strong support for infectious diseases diagnosis, treatment, and prevention (appendix). For every 1 million permanent urban residents, hospitals are equipped with at least one routine testing laboratory with capacity to analyse 10 000 samples per day.

Professional education and technical training opportunities are also continuously provided to the laboratory staff by the National Center for Clinical Laboratories. Nationwide external quality assessment programmes are organised regularly for all testing laboratories (appendix).

To detect COVID-19 outbreaks early and protect patients from getting infected in hospitals, all secondary and tertiary hospitals across China have fever clinics that provide services 24 h per day, 7 days a week. Fever clinics have been encouraged to acquire rapid SARS-CoV-2 testing tools that deliver results within 4–6 h and enable the timely identification of infections.[3]

China continues its population-based mass screening strategy to support the dynamic zero-COVID-19 policy. To implement such large-magnitude screening within epidemic areas in a short timeframe, routine testing laboratories in hospitals and public testing laboratories (including mobile laboratories and technical staff from surrounding neighbourhoods) can be mobilised urgently by the government. By the end of 2020, 100 mobile laboratories with a capacity to analyse 10 000 samples had been built, enabling a flexible testing reserve capacity of 1 million samples per day nationwide. Other large-scale and qualified independent clinical laboratories also participate in this mass screening strategy to accelerate sample testing turnover in every local epidemic area.

To improve the efficiency of mass screening, China has adopted the sample pooling strategy in three patterns (five, ten, or 20 pooled samples) on the basis of different epidemic periods.[4,5] With the optimisation of sample pooling methodology and development of an electronic information system, this sample pooling strategy ensures both high sensitivity and efficiency.

The cost of routine SARS-COV-2 testing during hospitalisation and in fever clinics, as well as the mass screening during an epidemic, are covered by basic medical insurance or by the government. These measures enable large cities with a population of 10 million people or more to complete SARS-CoV-2 testing within 24–48 h, without substantially affecting routine clinical services.[6]

The SARS-CoV-2 testing strategy has not only improved the containment of COVID-19 but also contributes to the control of other infectious diseases, such as HIV and human papillomavirus, and non-communicable diseases. China's COVID-19 response has accelerated its diagnostics agenda and testing capacity. To further optimise the COVID-19 detection strategy, China recently decided to supplement the existing strategy with antigen detection, and we will continue to accelerate technological innovation and develop the testing reagents for communities and remote areas. Ensuring universal access to diagnostics via effective and rapid testing is essential for the preparations for future pandemics.

HS is director of the National Clinical Research Center for Laboratory Medicine, which provides technical support for the national strategy of COVID-19 testing. All other authors declare no competing interests.

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What comes next in the COVID-19 pandemic?

The COVID-19 pandemic is not over, but with collaboration and solidarity, we can transition to a manageable endemic disease state sooner and better mitigate the most severe health and socioeconomic impacts. In this third year of pandemic response, society needs to focus on improved implementation of effective interventions to end the acute phase. Governments and health authorities have the necessary knowledge and tools in hand, in the form of vaccines, diagnostics, and therapeutics, but equitable availability of these tools remains a challenge globally.

Today's decisions and efforts will continue to affect the pandemic's overall health, social, and economic toll. According to Our World in Data, 700 000 deaths were recorded as COVID-19 related between January and March, 2022, and only 14·5% of people in low-income countries have received at least one dose of a COVID-19 vaccine. SARS-CoV-2 variants continue to emerge as trust between governments and their constituents is tested, rendering sustained implementation of broad community-based interventions challenging. In many communities, crucial non-COVID-19 health services are yet to be fully restored to pre-pandemic levels.

The emergency phase of the COVID-19 pandemic will eventually end, but when will be determined by collective actions. Likewise, what is learned and how society grows from this experience can still be influenced. The next pandemic need not catch the world so unprepared.

The extraordinary nature of this pandemic calls for extraordinary analyses at global, national, and organisational levels. Society must reflect on what has been learnt about ourselves, our communities, our governance, and our preparedness and response systems. SARS-CoV-2 has caused too much harm in terms of death, morbidity, careers, relationships, finances, plans, and dreams for us to fall short of rigorous and independent after-action appraisal of the pandemic response. Communities have a right to understand why and how the pandemic response unfolded the way it did and to be assured improvements will be made. National and global leaders must use the knowledge gained from this pandemic and its reviews to ensure more robust multidisciplinary governance and equitable health and public health systems going forward.

A fresh approach to global health security is needed as well as the development of better measures of preparedness, with a greater emphasis

For **Our World in Data COVID-19 deaths** see https://ourworldindata.org/grapher/cumulative-deaths-and-cases-covid-19

For **Our World in Data COVID-19 vaccinations** see https://ourworldindata.org/covid-vaccinations?country=OWID_WRL

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