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.

Living with the COVID-19 pandemic: act now with the tools we have

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The responses of countries to the COVID-19 pandemic have been disparate.[1,2] Many countries are reopening workplaces, schools, and social gatherings and striving to adapt their economies and resume international travel. Other countries are attempting to suppress transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by again restricting businesses, industries, and schools while hoping for future COVID-19 vaccines or treatments. The Strategic and Technical Advisory Group for Infectious Hazards (STAG-IH), the independent advisory group to the WHO Health Emergencies Programme, has reviewed information from countries around the world and has concluded that the most sound approach on the basis of current understanding is to deploy long-term strategies with a focus on preventing amplification of transmission, protecting those most at risk of severe illness, and supporting research to better understand the virus, the disease, and people's responses to them.

Evidence suggests that children shed SARS-CoV-2 as do adults, mostly with non-severe clinical presentations.[3] But many characteristics of SARS-CoV-2 are not yet fully understood, such as the levels of immunity and the immune response, the full spectrum of disease and long-term sequelae, the possibility of re-infection,[4,5] and the potential of the virus to become endemic. Until more is known about the immune response to SARS-CoV-2, it is not possible to make sound predictions.

SARS-CoV-2 does not seem to behave epidemiologically like influenza virus and continues to resurge in clusters or outbreaks, not always in waves with rapid widespread community transmission.[6] With a more precise and epidemiologically based public health response involving active case finding, contact tracing, and strategic testing strategies, outbreaks caused by SARS-CoV-2 can be contained and community spread decreased to a more manageable level.[7] Some countries in Asia and Europe (eg, South Korea, Japan, Hong Kong, Singapore, Vietnam, and Germany)[1,2] have shown that this approach keeps transmission at sustainably lower and safer levels than in countries not following this approach, thus preventing surges of patients in health facilities and decreasing overall mortality.[2] This approach is based on three principles: understanding, trust, and participation by all population groups; decreased transmission of SARS-CoV-2 using basic epidemiological and public health interventions; and acknowledging that any potential COVID-19 vaccines and treatments will only be part of the solution and that they will best perform in conjunction with a long-term overall public health strategy. The components of this epidemiologically based public health response to the COVID-19 pandemic (panel)[8] are familiar to public health specialists, but have been neglected or are inappropriately understood in some countries, both by leaders and the general public.

Alongside this comprehensive response, continued assessment is needed of how best to resume international travel. Most countries have focused on international travel as a risk for the (re)introduction of SARS-CoV-2 and use various risk-mitigation strategies (eg, PCR testing of international travellers and voluntary or mandatory isolation after arrival). Yet there is no optimum way to prevent importation of SARS-CoV-2, no matter how rigorously quarantine and testing are applied, because of the range in the SARS-CoV-2 incubation period (2–14 days),[11] the spectrum of disease (with subclinical and mild illness in many infected individuals), the fact that many travellers return to households with others who are not quarantined, and the number of days after infection to the time when PCR testing becomes positive. Other measures that could be equally or more effective include urging travellers to monitor their health and recommending they do not travel when ill; questioning travellers about their health status immediately before they travel; adhering to personal hygiene measures, physical distancing, and wearing masks in public when physical distancing is not possible; reporting illnesses to the destination country; and ensuring implementation of measures to provide safe travel environments. Introduction of digital smart tools might complement these measures and their evaluation should be continued.

Many countries consider that travel is safer from locations with low circulation of SARS-CoV-2 and strong capacities for outbreak containment, and they

are keen to obtain credible information about the infection and transmission status of other countries. Available WHO case reports are, however, based on laboratory-confirmed SARS-CoV-2 infections and since testing strategies vary by country[2] they are not an accurate indication of true transmission rates. Identification and use of more meaningful indicators of infection and transmission status are urgently required.

COVID-19 vaccines, therapeutics, and diagnostics are important for the pandemic response, and if any of the COVID-19 vaccine candidates are shown to be safe and effective, they will probably be deployed before full approval through emergency use authorisations or other strategies. Strategies must be developed to ensure equitable access through the COVAX pillar of the Access to COVID-19 Tools (ACT) Accelerator[12] and other mechanisms. In terms of treatments, use of glucocorticoids for critically ill patients is now best practice on the basis of evidence from clinical trials.[13] Other therapeutics, including antivirals (nucleoside analogues and antibody preparations) and immunomodulators, continue to be investigated.[14] Multiple diagnostic tests for nucleic acid, antigen, and antibody are being evaluated, including by a partnership between WHO and the Foundation for Innovative New Diagnostics (FIND).[15] As results of this research become available, countries will be able to make decisions about which tests meet their own standards and fit with their testing strategies. One example is the announcement by WHO, FIND, and The Global Fund to Fight AIDS, Tuberculosis and Malaria on the provision of externally validated, point-of-care rapid antigen detection diagnostic tests for SARS-CoV-2.[16] As other diagnostic tests are externally validated, they must be made widely available through the ACT Accelerator and other access mechanisms. Despite the urgency of identifying effective therapeutics and vaccines for COVID-19, the rules of science and the ethics of clinical research do not change in the setting of a pandemic. The most effective way to develop vaccines and therapeutics is through trials with robust safety and efficacy endpoints.

With current knowledge, even in the absence of COVID-19 vaccines or treatments and comprehensive knowledge of the immune response to SARS-CoV-2, countries can navigate pathways to reduced transmission, decreased severe illness and mortality, and less economic disruption in the short and longer term.

***Panel:* Checklist of the basic components of an epidemiologically sound public health response to COVID-19 pandemic**

✓ **Rapidly detect people with infection, outbreaks, and sites of increased transmission**
Strengthen surveillance of influenza-like illness[9] and acute respiratory tract infections and/or establish detection systems in health and other sectors, including schools, the homes of schoolchildren, and workplaces

✓ **Isolate and manage people infected with SARS-CoV-2**
Individuals who test positive for SARS-CoV-2 need to be isolated and managed at an appropriate level of care with best practices that incorporate evolving evidence

✓ **Investigate outbreaks**
Retrospective contact tracing and diagnostic testing, and/or serological surveys[10] are needed to investigate outbreaks and understand where transmission is occurring

✓ **Decrease community transmission**
Prospective contact tracing and self-quarantine of contacts must be undertaken, with the use of testing in a way that ensures that those contacts who develop signs and symptoms of COVID-19 can be properly managed

✓ **Strengthen control measures**
Ensure individuals, communities, and organisations are fully engaged in control activities (eg, physical distancing, wearing masks, and handwashing and cough and sneeze etiquette)

✓ **Ensure that testing is strategic**
Use highly sensitive and specific nucleic acid, antigen, and antibody tests linked to surveillance and contact tracing, patient diagnosis, and management

✓ **Protect the health and social care system**
Ensure that health facilities can accommodate the current disease burden and any disease occurring from future resurgence by protecting health workers and strengthening infection prevention and control practices; understanding the characteristics of high-risk groups and increasing their protection, especially in institutions such as care homes where they may live; and monitoring the health-care system to plan for and secure additional capacity if needs arise

✓ **Continue mitigation of general risks**
Prevent or de-risk large public gatherings and events

✓ **Involve the business and private sectors**
Engage with private sector in innovative ways to ensure a safe and productive workforce

✓ **Apply short-term preventive and mitigation measures**
Use these short-term measures, such as time-limited closures and restrictions where transmission is occurring, until transmission has been reduced or eliminated

✓ **Conduct, fund, and support research**
Research is crucial to better understand the characteristics of SARS-CoV-2, including the course of infection and the immune response; establish cohort studies to understand the extent of sequelae; and conduct qualitative studies to better understand and strengthen people's response to COVID-19; at the same time, continued clinical research on vaccines, therapeutics, and diagnostics is also required

Despite geopolitical tensions, information contributing to greater understanding of COVID-19 continues to be shared within the scientific community and with WHO. International travel is increasing, economic

and education sectors are reopening, and countries are benefiting from the experiences of others as they continue to live with the COVID-19 pandemic and develop more effective control strategies.

We are all members of the WHO Strategic and Technical Advisory Group for Infectious Hazards and declare no competing interests.

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The opioid crisis and the 2020 US election: crossroads for a national epidemic

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Health care is a major point of differentiation in the upcoming US presidential elections. One priority area is the opioid crisis. In 2019, reported deaths from drug overdose in the USA reached an all-time high of almost 72 000, with opioids involved in more than two-thirds of the total deaths.[1] The COVID-19 pandemic has exacerbated an already difficult situation by reducing access to life-saving treatment, harm reduction, and recovery support services, while increased stress and isolation might increase the risk of addiction and substance use disorders (SUDs).[2] As of July, 2020, deaths from drug overdose in the USA rose by an estimated 13% in the first half of the year compared with 2019, according to data compiled from several local and state governments. In some states, drug-related deaths climbed by over 30%.[3] The pandemic has also triggered an economic recession that threatens the survival of some addiction treatment centres,[4] and is expected to exacerbate social barriers such as housing instability, which can further hinder treatment of SUDs.[5] Against this backdrop, the presidential candidates propose divergent policy solutions to counter the opioid epidemic. There are three major differences.

First, the policy proposals differ in how they will treat addiction. Just one in five people with opioid use