

POLICY BRIEF ENSURING AN EQUITABLE PANDEMIC RESPONSE: LESSONS LEARNED FROM COVID-19



Task Force 11 COVID-19: MULTIDISCIPLINARY APPROACHES TO COMPLEX PROBLEMS

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فريق العمل الحادي عشر **كوفيد-١٩: نُهج متعددة التخصصات للمشكلات المعقدة**

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The COVID-19 pandemic has exposed our collective vulnerability, as the health of the global community has proven crucial to maintaining the health of individual communities. In essence, we are only as strong as our weakest link. In this policy brief, we present lessons learned from the COVID-19 pandemic and propose measures to improve our response to future pandemics through equitable capacity building. This policy brief calls for the equitable distribution of medical goods and supplies, as well as an equitable and diversified application of research funding and focus.

كشفت جائحة كوفيد-١٩ نقـاط ضعفنـا الشـاملة، فقـد ثبـت أن صحـة المجتمع العالمي جوهريـة مـن أجـل الحفـاظ على صحـة المجتمعـات الفردية. وقـد تبيّـن في الأسـاس أن قوتنا لا تتجاوز أضعـف حلقـة بيننا. وفي ملخّـض السياسـة هـذا، نعـرض الـدروس المسـتفادة مـن جائحـة كوفيد-١٩، ونقتـرح تدابير لتحسـين اسـتجابتنا للجائحـات المسـتقبلية مـن خـلال بنـاء القـدرات لإسـتجابة عادلـة للأزمـات. ويدعـو ملخـص السياسـة هـذا إلى توزيع عـادل للبضائع والإمـدادات الطبية، بالإضافـة إلى العمـل على توزيع مـدروس ومتنـوع لتركيز مواضيع الأبحـاث وتمويلهـا.



In addition to affecting a society's health, economic well-being, and social life, viral pandemics can also strain health systems and place tremendous pressure on limited health resources. As a result of the COVID-19 pandemic, health sectors worldwide have been facing unprecedented levels of demand for diagnostics and treatments (Scarpetta et al. 2020). Shortages of medical resources, such as testing kits, personal protective equipment (PPE), hospital beds, and ventilators, have been revealed in many countries, both rich and poor. Individual countries' responses to this pandemic have highlighted severe disparities between countries regarding access to essential medical resources that could aid in not only preventing the spread of the disease but in mitigating its effects as well.

The pandemic has also exposed the limited knowledge we have related to socio-behavioral interventions as well as our insufficient understanding of zoonotic viruses' transmission—knowledge that is crucial if we are to prevent a future global pandemic of this nature. The pandemic has also demonstrated a lack of coordination in research efforts; the imbalanced approach is evident in the over-abundance of global hydroxychloroquine trials and studies at the expense of other research areas and potential treatments.

One such neglected research area is testing and contact tracing, which has proven vital in limiting the spread of viruses within communities. Early East Asian success stories have demonstrated the importance of developing a robust testing and contact tracing capacity, as a strong and active surveillance system requires an effective laboratory network to adequately identify cases and trace contacts (Shokoohi, Osooli, and Stranges 2020).

Another challenge highlighted by the COVID-19 pandemic is the protection of intellectual property rights, especially in the case of pharmaceutical discoveries and vaccines. Such rights are a potential barrier to public health protection, especially if they prevent access to essential lifesaving medical resources. If a COVID-19 vaccine is produced, poor countries could be left to the mercy of vaccine producers. These countries have very low influence and bargaining power, and international power dynamics are expected to affect their ability to obtain vital medical resources protected under patent laws. These aforementioned factors demonstrate that the challenges that have emerged from the COVID-19 pandemic are mainly due to an unequitable approach. In this policy brief, we define a two-pronged approach toward building greater equity. The first is the equitable distribution of physical goods (such as therapeutics, vaccines, PPEs, respirators, etc.), and the second is an equitable application of research focus and funding, with vaccines, therapeutics, equipment, socio-behavioral measures, and biotechnology all being viewed as one element toward building a resilient pandemic response.



An equitable pandemic response should be viewed through the lens of both physical resources and the funding and focus of research. An equitable distribution of physical resources is important for ensuring an effective response at the local level, which would then significantly help mitigate spillover effects at the global level. The COVID-19 pandemic has demonstrated how interconnected the health of the global community truly is; if one region of the world is unable to adequately treat and contain a virus, that virus may spread further, jeopardizing the physical and economic well-being of hundreds of millions of people.

This pandemic could present a valuable learning opportunity for the Group of 20 (G20) leadership to create a more cooperative global health system in the future. Nations worldwide must be encouraged to provide assistance and resources to others in dire need in order to protect global public health. To do so, however, these nations must be fully prepared to help themselves first; only then may they be able to help others. For this reason, it is essential to develop universal guidelines in addition to global cooperation mechanisms for providing guidance during future pandemics. The G20 plays a critical role in promoting international collaboration and ensuring commitment toward establishing equitable access to essential medical resources on a global level. Priority should be given to regions that are most affected and have the greatest need, as this strategy could act as a vital first step in protecting the rest of the world from the spread of a virus or disease.

An equitable application of research funding and focus is also crucial for gaining a comprehensive and clear understanding of the nature of a disease, developing appropriate mitigation and response methods for preventing its spread, and ultimately, mitigating its effects. An inadequate application of either research focus or funding may lead to the concentration of effort in limited areas and the potential neglect of promising technologies and innovations that may initially be perceived as high-risk investments.

The G20 countries must develop more coordinated research efforts that balance wider research categories with various levels of risk regarding the return on investment. Efforts should be made to preserve and nurture research diversity for developing better, more cost-effective solutions. Coordinated research efforts may also help avoid the "groupthink" effects that typically emerge during a crisis response (Hart 1991). Groupthink can be defined as "a psychological drive for consensus ... that suppresses dissent and appraisal of alternatives in cohesive decision making groups" (Janis 1972, 186). In terms of research, one example of global groupthink resulted in 117 clinical trials in dozens of countries for testing the efficacy of the same drug (hydroxychlo-roquine). The drug was eventually ruled out as an effective line of treatment (DeVito, Liu, and Aronson 2020). These uncoordinated research efforts resulted in a massive waste of efforts, funds, and time that may otherwise have been utilized not only for seeking a wider range of effective alternative treatments, but also for focusing on other preventative measures. Encouraging, empowering, and supporting independent and non-profit research organizations may help counter the groupthink inadvertent-ly caused by the directions and actions of larger, well-funded organizations.

We believe that in order to establish a resilient mechanism to respond to future pandemics, vaccines, therapeutics, medical equipment, socio-behavioral measures, and biotechnology should all be viewed equitably as one element of the overall pandemic response. We, therefore, propose the following recommendations.

The G20 must support the establishment of global policies to ensure the equitable coordination and distribution of essential medical supplies and equipment during health crises.

Increasing international coordination would enhance health systems' capacities and help allocate resources based on need and impact, in stark opposition to the protectionist measures that were observed during the spread of the COVID-19 pandemic. Priority should be given to communities with the greatest need and those that are most affected by a virus or disease; this strategy could act as an important first step in protecting the rest of the world from its spread. Under the G20's leadership, low and middle-income countries (LMICs) must be supported to ensure they have a fair opportunity to buy or locally produce therapeutics or vaccines. Innovative financing mechanisms can be utilized to support LMICs in developing the infrastructural and production capacity needed to effectively respond to a pandemic.

To respond to pandemics effectively, health supply chains should be designed to swiftly and reliably source and deliver essential health products, including vaccines, equipment, medications, and PPE. Interdependence along supply chain networks will require countries to lift export bans and trade restrictions on raw materials and streamline the cross-border logistics of medical freight (Park et al. 2020). The G20 leadership must also identify and recommend the utilization of the latest technology, best practices, and evidence-based methods for the storage and transportation of vaccines, pharmaceuticals, and essential medical resources.

Additionally, an adequate pandemic response must be ensured at the country level for effective international cooperation.

Guidelines for effective local responses to a pandemic should also be addressed by the G20 leadership. National guidelines may focus on developing domestic manufacturing capabilities and strengthening cooperation and communication between the public and private sectors. The public and private sectors, nongovernmental organizations, and civil society must all play their part in developing and executing the roadmap for fighting a pandemic. The development of transparent policies would keep local communities informed of national plans and pandemic response progress. This form of cooperation will support the development of more resilient and flexible local health systems in the face of a pandemic and is a step toward further preparing these communities for international cooperation.

It is important to develop policy alternatives that support and reward medical innovation and protect intellectual property rights, while ensuring affordable access to advanced medicines.

Intellectual property rights and patent laws should not hinder pandemic response or prevent equitable access to vaccines and essential medical resources. Article 25 of the Universal Declaration of Human Rights clearly acknowledges the right to adequate medical care (United Nations 1948), and the G20 leadership must ensure that this right can be claimed by all people equally. Patent laws should be respected; however, the G20 countries have a vital role in promoting international collaboration and ensuring equitable access to essential medical resources on a global level. International and national institutions should make public health-related patent regulations a priority to overcome medical supply shortages. It is necessary to develop policy alternatives that support and reward pharmaceutical and medical innovations while also ensuring affordable access. Other options include the development of an international fund supporting medical innovation, the use of patent pools, and open-source drug development to allow for the manufacturing of generic drugs. Patent pools allow third parties to acquire non-exclusive licenses for the intellectual property needed to develop products (Burrone et al. 2019).

Countries must develop more coordinated research efforts that balance wider research categories with various levels of risk regarding the return on investment (ROI).

This can be achieved by encouraging prevention research at a socio-behavioral level, which requires a larger, or at least similar, degree of priority as accorded to treatment and vaccination projects, especially from governments and not-for-profit organizations. Furthermore, innovation and experimentation should be encouraged by allocating financial and non-financial support to innovators in areas related to improving global resilience and preparedness for future pandemics continuously, and not just during active epidemics or pandemics. In addition, some disruptive research and innovation projects lack a clear vision of the market and potential utilization and generally carry a high ROI risk. However, these projects may provide far superior results than conventional projects with well-defined marketability or risks. Identifying various levels of ROI risks and allocating more funds to medium and high-risk projects are important measures to advance global readiness for future pandemics. Finally, creating clusters of research groups focusing on different areas of intervention and facilitating effective collaboration would significantly help prevent redundant efforts.

Measures should be taken to identify and manage neglected areas of research and innovation in order to support unconventional disruptive ideas and solutions as well as for preserving and nurturing diversity in research; such measures can greatly reduce the effort and time involved in providing better, cost-effective solutions.

One example is diversifying calls for identifying potential new therapeutic agents once the number of trials of a certain agent has reached a satisfactory threshold. Another example is supporting research and innovation regarding the re-processing of single-use PPE to reduce their demand, while improving their availability. Thus, there is a need to encourage, empower, and support local and international not-for-profit and independent research and innovation organizations, especially small- and medium-sized organizations, to counter the groupthink effect inadvertently caused by larger, well-funded organizations. Conversely, it is also essential to achieve a separation of operational health organizations (those who operate mainly to provide health services) and independent health research organizations (those who operate mainly to provide health research and innovation) in terms of management and funding. Such separation will allow more room for innovation and disruptive ideas while encouraging more diverse collaborations.

For example, large organizations currently raise funds for health research based on issues and gaps highlighted by operational organizations and disburse those funds as grants, for which research organizations compete. This model gives operational organizations the opportunity to direct research efforts toward a narrow area while obstructing innovations. Finally, encouraging transparency in sharing data, challenges, gaps, and pain areas within the current implemented system (policies, procedures, and infrastructure) of operational health organizations will provide independent health research organizations an opportunity to pursue innovative research ideas that are both applicable and can be smoothly implemented within the current system.

Many countries continue to lack adequate testing capacity, which has been proven crucial in preventing the spread of COVID-19. Future pandemics will require rapid scaling of testing and laboratory capabilities.

It quickly became evident that one of the main challenges in mounting a response to the COVID-19 pandemic was weak testing capacity, not only at a global level, but also at the national level, with significant variations even within regions of the same country. For example, testing capacity may be available in some cities and not in others, leading to delays in receiving test results caused by internal supply chains. Thus, research efforts should focus on developing more efficient and cost-effective measures to rapidly increase testing capacity globally.

Regional testing hubs coordinated by several neighboring governments could help countries scale up rapidly, and regions with better infrastructure should be encouraged to support less fortunate regions. This form of cooperation will support the development of more resilient health systems with better flexibility in the face of a future pandemic. Existing regional networks and political frameworks may be utilized to support such an endeavor. In addition, the G20 leadership should lead the establishment of minimal standards in relation to the infrastructure needed to improve countries' preparedness to test for future pandemics and support countries in implementing these minimal standards.

Disclaimer

This policy brief was developed and written by the authors and has undergone a peer review process. The views and opinions expressed in this policy brief are those of the authors and do not necessarily reflect the official policy or position of the authors' organizations or the T20 Secretariat.



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