
Strengthening WHO preparedness for and response to health emergencies

Report by the Director-General

1. This report is submitted pursuant to requests in resolution WHA74.7 (2021) on strengthening WHO preparedness for and response to health emergencies. It provides information on the steps taken by the Director-General to date in response to those requests and outlines the work still required in order to strengthen WHO's capacity: to provide effective support to the efforts of Member States to strengthen their capability to prepare for and respond to health emergencies; and to strengthen the readiness of WHO to respond to health emergencies as the central organization within a coordinated, global health emergencies framework. In line with additional requests made in resolution WHA74.7, the report also summarizes the support provided by the Secretariat to the Member States Working Group on Strengthening WHO Preparedness and Response to Health Emergencies.

2. In resolution WHA74.7, the Health Assembly, having taken note of the recommendations of reviews, including those of the Independent Panel for Pandemic Preparedness and Response, requested the Director-General to strengthen the Organization's capacity to prepare for and respond to health emergencies in key areas. Guided by this resolution, the Secretariat has built on the existing framework of the three outcomes for achieving the target of one billion people better protected from health emergencies set out in the Thirteenth General Programme of Work, 2019–2023 and the Programme budget 2022–2023 by launching a coordinated series of initiatives that will form the foundation of a new system for global health emergency preparedness and response. The three outcomes are: countries prepared for health emergencies; epidemics and pandemics prevented; and health emergencies rapidly detected and responded to.

3. In addition to incorporating significant transformational changes to improve impact that were already under way before the advent of coronavirus disease (COVID-19), the Programme budget 2022–2023 also responded to the early lessons from COVID-19, recognizing that key recommendations would emerge later to advance and enhance emergency preparedness and response. Although this report describes the steps taken since the adoption of resolution WHA74.7, the sustained and successful implementation of the resolution will, in many cases, need supplementary support during the biennium 2022–2023. The report is structured around the three outcomes set out in paragraph 2. It should be borne in mind, however, that many of the new platforms and initiatives that will constitute a responsive and effective global mechanism for health emergencies cut across, to a greater or lesser extent, the essential elements of the health emergency cycle, from preparedness and readiness through prevention and response.

Outcome 2.1: Countries prepared for health emergencies

4. The calibration of the Secretariat's support to countries during the early stages of the COVID-19 pandemic was largely made possible by the progress made in recent years in assessing and reporting on

national capacities to prepare for health emergencies, as required under the International Health Regulations (2005). The rapid spread of COVID-19 showed, however, that the world as a whole was unprepared for a pandemic, and that expanding the way in which Member States, the Secretariat and partners dynamically and collectively assess national all-hazards emergency preparedness to include readiness, governance, health systems and community resilience would increase the predictive value of assessments of preparedness. Neither individual governments nor the global community can entirely prevent health emergencies, but the global community can be much better prepared and better aligned in its responses through more effective multisectoral, multidisciplinary and transnational collaboration on preparedness and response at the local, national, regional and global levels.

5. Pursuant to resolution WHA74.7, the Secretariat has begun the process of piloting and testing an expansion of both the sectoral and geographical scope of existing tools, including the State Party self-assessment annual reporting tool, voluntary joint external evaluations, after-action reviews and simulation exercises, with a stronger emphasis on subnational preparedness. In addition, it has begun to pilot the Universal Health and Preparedness Review mechanism, and is elaborating a plan in consultation with Member States for the full-scale launch of the peer-review process based on the results of the pilot stage. The aim of the Review is to build mutual trust and accountability for health, by bringing nations together as neighbours to support a whole-of-government approach to strengthening national capacities for pandemic preparedness, universal health coverage and healthier populations.

6. The COVID-19 pandemic has highlighted gaps in the core capacities for emergency preparedness in countries. The new generation of tools for preparedness assessment and reporting that are being developed will provide a means to identify the gaps in good time, and in a greater technical, operational and geographical depth and breadth than was previously possible. Identification of gaps, however, is only half the challenge of strengthening preparedness. COVID-19 has also shown how quickly capacities can be strengthened when partners coalesce around a clear plan, galvanized by political will and with the resources to sustain positive changes. Harnessing that political will to strengthen core national capacities for global health security will require a fresh approach to financing multisectoral national action plans for health security. The Secretariat is catalysing this process, for instance through high-level political engagement with funding partners and Member States, and through the accelerated development and introduction of tools for resource mapping and partner coordination that have proved their worth throughout the pandemic.

7. Support for strengthening preparedness is necessarily specific to context, but Member States have requested urgent support to strengthen core capacities in: laboratories; clinical management; disease surveillance, including at the human-animal interface; multisectoral coordination; community resilience; risk communication and infodemic management; and health-system strengthening. The Secretariat is ready to meet the scale, nature and urgency of support requested by Member States but will need increased financial input during the biennium 2022–2023, contingent on the outcome of the discussion of the revision of the Programme budget 2022–2023.¹

8. Robust and flexible platforms for coordination and collaboration can harness the national capacities built through smart, coordinated strengthening of preparedness and readiness and enable their translation into a regional and international capability for health emergency preparedness and response. Initiatives such as the global health workforce (see paragraphs 17–21 below) exemplify well how the Secretariat can work with Member States using the power of new technological solutions for

¹ See document EB150/28.

coordination, strengthened national capacities and the political will to prevent another global pandemic to create a global good that draws on and multiplies national capabilities.

9. Turning the global interconnectedness that has increased our collective vulnerability to infectious pathogens into a source of strength is a thread that runs through the Secretariat's approach to implementing resolution WHA74.7, and increased funding for multisectoral preparedness and readiness at national level is central to this objective. An interconnected global system for public health intelligence, for example, has the potential to revolutionize our ability to detect and communicate information about emerging outbreaks rapidly. In this model, strong, standardized and interoperable national capacities can be linked to global centres of technical and analytical expertise in order to harness the potential of technologies such as artificial intelligence and machine learning. These technologies have not only the potential to transform the speed at which we recognize and communicate threats but also the speed at which, and depth to which, we understand the natural history of infectious pathogens, their transmission dynamics, and their susceptibility over time to public health and biomedical interventions.

10. Such a global early warning and alert system would enable a broader health emergency intelligence system to rapidly detect and understand a threat, and promptly act on that information to mount a rapid, coordinated, sustained and adaptable emergency response at any and all levels: national, regional and/or global. The Secretariat has already taken concrete steps towards putting this global capability in place. On the one hand, it is working with Member States to develop detailed plans to strengthen national-level capacities for disease surveillance as part of building capacity for preparedness and readiness; and on the other, it inaugurated the new WHO Hub for Pandemic and Epidemic Intelligence, based in Berlin, in 2021. The Hub, currently in its start-up phase, is intended to be the central node of a global health intelligence network: putting global collaborative expertise at the service of Member States to strengthen national capabilities, at the same time as harnessing complementary expertise to make the best use of the inputs from the national and subnational levels. By the end of 2022 the hub is expected to have expanded to about 60–80 members of staff, working beside experts from traditional and non-traditional partners alike.

Outcome 2.2: Epidemics and pandemics prevented

11. Throughout the COVID-19 pandemic, WHO has harnessed global knowledge and expertise to translate evidence into effective health emergency policy. Effective policy and control strategies for all epidemic-prone and pandemic-prone diseases, high-threat pathogens, emerging and hypothetical ("disease X") zoonoses and biorisks are either complete (for example, for yellow fever, cholera and meningitis) or under development (for example, for viral haemorrhagic fevers and diseases due to high-threat respiratory pathogens and arboviruses). The Organization aims to accelerate the development and implementation of disease-control strategies. Investment in disease prevention, especially through proven tools such as vaccination and vector control, remains one of the best-value interventions available in health security, and will be essential for the achievement of the health-related Sustainable Development Goals and the target of one billion people better protected from health emergencies.

12. WHO continues to explore how its core strength as a technical and normative agency can be further adapted to the unique demands of health emergencies, for example through new mechanisms and platforms for rapidly convening and working with expert networks and advisory groups, harnessing the power of WHO collaborating centres, and strengthening ties with regional and national sources of knowledge and expertise through new ways of working.

13. Enhancing and expanding networks, mechanisms and incentives for the sharing of pathogens, biological samples and genomic data are vital to global pandemic preparedness, and remain a pressing priority. A lack of timely access to high-quality pathogen specimens and genomic data remains a major barrier for the rapid development and fair and equitable deployment of safe and effective diagnostics and vaccines. In resolution WHA74.7, the Health Assembly requested the Director-General to work together with Member States, the medical and scientific community, and laboratory and surveillance networks, to promote early, safe, transparent and rapid sharing of samples and genetic sequence data of pathogens of pandemic and epidemic, or other high-risk, potential, taking into account relevant national and international laws, regulations, obligations and frameworks. In that regard, in 2021 the Director-General launched the pilot testing phase of the WHO BioHub System, the goal of which is to offer a reliable, safe, and transparent mechanism for Member States to voluntarily share novel biological materials, without replacing or competing with existing systems. It is intended that sharing of biological materials with epidemic or pandemic potential will be done through the System through one (or more) of the laboratories designated as a WHO BioHub Facility; the first such Facility is based in Spiez, Switzerland, pursuant to a Memorandum of Understanding signed between WHO and the Swiss Confederation. The BioHub is now at the start-up phase for sustainable pathogen-sharing, and is expected to be further developed, through its system design phase, in 2022, in consultation with Member States. This System is intended to be an essential element of a global mechanism for the standardized collection, characterization and archiving of viruses, other pathogens with pandemic potential and specimens to facilitate and accelerate the development of diagnostics, therapeutics and vaccines.

14. The BioHub initiative aims to contribute to the acceleration of research and innovation before and during epidemics and potential pandemics. The COVID-19 pandemic and other recent epidemics have highlighted the need to continue to strengthen capacity worldwide to rapidly develop and equitably deploy medical, public health and social countermeasures to prevent, identify and contain outbreaks and to reduce morbidity and mortality. The rapid development of innovative tools such as vaccines and diagnostics must be part of a global mechanism to ensure that technologies are tested, manufactured and distributed at a scale and with an absolute commitment to equity that will ensure they fulfil their potential as a global good. WHO's research and development blueprint for action to prevent epidemics and the three vertical product pillars of the Access to COVID-19 Tools (ACT) Accelerator provide a foundation on which to build a transparent and coordinated global mechanism whereby research and innovation priorities are set upstream. Downstream, at the community level, the WHO-led, cross-cutting Health Systems and Response Connector of the ACT-Accelerator provides a template for coordinated, collective action to deliver the products of research to the populations most in need. WHO continues to explore with partners ways in which the successes of the ACT Accelerator can be institutionalized and built on over the coming months and years.

15. COVID-19 has brought the issue of biorisks and zoonotic threats into stark relief. WHO now co-chairs the United Nations Bio-risk working group: an interagency group charged with improving United Nations-wide coordination on the mitigation of biorisks. The initial work of the working group has focused on system mapping, developing a guidance framework and engaging stakeholders, together with a table-top exercise to test current coordination capacities. Its activities will be broadened over the coming 12 months. In addition, WHO is strengthening the scientific advice made available to the Tripartite Plus (comprised of the Food and Agriculture Organization of the United Nations, the World Organisation for Animal Health, WHO and the United Nations Environment Programme) by setting up a One Health High-Level Expert Panel focusing on the prevention of emerging zoonoses. On 23 November 2021, the Secretariat convened the first meeting of the newly-formed WHO Scientific Advisory Group for the Origins of Novel Pathogens, following an open call for applicants and a rigorous review process. The Scientific Advisory Group will advise the Secretariat on technical and scientific considerations regarding the origins of emerging and re-emerging pathogens of epidemic and pandemic potential, and brings together expertise in fields including infectious diseases, epidemiology, molecular

biology, veterinary medicine, bioinformatics, social sciences, laboratory safety, and biosafety and biosecurity.

16. The problems of misinformation, disinformation, lack of information and information presented in a way that is not accessible to communities have increasingly been identified as significant exacerbating factors during many health emergencies. The evidence-based approach to the management of this infodemic is still in its infancy, and many important questions remain to be answered, such as how online behaviour affects offline action, how overwhelming amounts of information affect health-seeking behaviour, and how the relative success of policy interventions aimed at strengthening resilience to misinformation should be judged. The Secretariat is working with partners and Member States to create the tools to answer these questions through scalable, adaptable collaborative research platforms that will continue to build the evidence required to inform policy on dealing with the infodemic both during and between health emergencies.

Outcome 2.3: Health emergencies rapidly detected and responded to

17. Early detection, rapid risk assessment and clear communication are the foundations of an effective response to any health emergency. Funding tied to COVID-19 has enabled WHO regional offices to strengthen health emergency information management more broadly by introducing public health surveillance tools such as District Health Information Software 2 and the Epidemic Intelligence from Open Sources initiative and to expand the latter. It has also facilitated expansion of disease surveillance systems to record not only disease outbreaks in human populations but also information on potential risks at the human–animal interface and signals related to climate change, industrial hazards and conflicts. Consolidating these gains and building on them will be a key challenge beyond COVID-19. Improving WHO’s own ability to source, verify and share event information for maximum public health benefit will be a primary task for the WHO Hub for Pandemic and Epidemic Intelligence (see paragraph 10).

18. Equally as important as the speed at which threats are verified and reported is the speed and degree of an effective collective response to identified threats. Every country should have a trained and equipped multidisciplinary health emergency workforce, based on subnational and national risk analyses. Building these capacities will, again, require substantial investment and support from WHO and partners for instance through the Global Outbreak Alert and Response Network and the Emergency Medical Teams initiative. To harness these national capacities in response to large-scale health emergencies the Secretariat will need to develop a mechanism for training, coordination and deployment that is able to access and deploy resources from a pool of national and regional responders, augmented by regional and global capacity provided by WHO, the Global Outbreak Alert and Response Network, and the wider United Nations system. This combination of coordinated, deployable, interoperable national capacities, complemented by the operational capacity of WHO and its partners, will constitute one of the major missing structural pieces of the global health emergency system to date: a global health emergency workforce able to respond rapidly to any acute event.

19. Building the requisite national capacities, and developing and sustaining a flexible coordination mechanism will require investments at all levels of the Organization. The continued development of WHO’s Public Health Emergency Operation Centre Network will be crucial, alongside the continued development, piloting and introduction of specialized crisis-management software that provides Member States, the Secretariat and operational partners, from the deep field to headquarters, with a unified platform that integrates all the data and functionality required for acute emergency response, from alert verification and communication to field deployment.

20. In parallel, WHO has continued to work with partners to develop a global emergency supply chain for health, building on the experiences of COVID-19 and a review of the Emergency Global Supply Chain System (COVID-19) that was completed in February 2021. The Secretariat has continued to plan to integrate the work of regions and headquarters on demand ascertainment and generation, strategic procurement, stockpiling, and distribution from hubs. The aim is to ensure a rapid, resourced, coordinated and uninterrupted supply of essential commodities that unites technical expertise and quality assurance upstream with rapid access to financing instruments such as volume guarantees and bridge funding for procurement, transport capacity, end-user training, delivery, and monitoring of usage.

21. Fragile, vulnerable and conflict-afflicted countries require operational and material support several steps beyond that which WHO is requested to provide to other countries during acute and protracted crises. WHO's country business model is designed to ensure that its country offices in the most fragile, vulnerable and conflict-affected countries have full technical and operational capacity to deliver services to the some of the world's most vulnerable and marginalized communities. A fully-funded country business model will ensure access to essential health services, including immunization and those for mental health and maternal and child health, and protection from health emergencies. In fragile, vulnerable, and conflict-affected contexts, achieving any of the three outcomes that comprise the health emergencies billion target requires that WHO can sustain its presence and ability to strengthen essential services and act as a provider of last resort.

SECRETARIAT SUPPORT TO THE MEMBER STATES WORKING GROUP ON STRENGTHENING WHO PREPAREDNESS AND RESPONSE TO HEALTH EMERGENCIES

22. The support provided by the Secretariat to the Member States Working Group on Strengthening WHO preparedness and response to health emergencies included provision of complete, relevant and timely information for its discussions, as requested in resolution WHA74.7. To that end, the Secretariat compiled the recommendations provided by various panels and committees of the global COVID-19 response into a database with a dashboard tool.¹

Dashboard of recommendations related to COVID-19

23. The dashboard provides an overview. It maps recommendations; categorizes them by themes, target groups and areas of work, as derived from the original recommendations themselves; and highlights the similarities and differences between the various recommendations. The aim is to provide access to the recommendations as well as a perspective of the gaps in global pandemic preparedness and response.

24. The dashboard is a living tool that is regularly updated to reflect new information. In consultation with Member States, the Secretariat has thus far included recommendations issued by official reports commissioned by Member States; documents placed in the public domain by intergovernmental bodies; non-papers submitted by Member States; and other reports or papers published by recognized independent expert parties over the past two years that are pertinent to the COVID-19 pandemic.

¹ WHO dashboard of COVID-19 related recommendations. Geneva: World Health Organization (<https://app.powerbi.com/view?r=eyJrIjoiODgyYjRmZjQtN2UyNi00NGE4LTg1YzMtYzE2OGFhZjBiYzFjIiwidCI6ImY2MTBjMG13LWJkMjQtNGIzOS04MTBiLTNkYzI4MGFmYjU5MCI6ImMiOj99&pageName=ReportSection729b5bf5a0b579e86134>, accessed 1 December 2021).

25. The database currently contains 343 recommendations from 23 source documents. Among other analyses available, all recommendations have been mapped against four areas of primary scope; these are:

- (a) leadership and governance (50% of recommendations are mapped against this area);
- (b) system and tools (23% of recommendations);
- (c) finance (20%);
- (d) equity (7%).

26. Following discussions within the Working Group, its further work has focused solely on the 131 recommendations issued by the Independent Panel for Pandemic Preparedness and Response, the Independent Oversight and Advisory Committee for the WHO Health Emergencies Programme, the Review Committee on the Functioning of the International Health Regulations (2005) during the COVID-19 Response, and the Global Preparedness Monitoring Board.

Mapping of recommendations and analysis of their implementation

27. Further to requests from the Working Group, the Secretariat prepared document A/WGPR/3/5,¹ which outlines the main areas of convergence and divergence among the COVID-19-related recommendations issued by the different panels and committees. In addition, the document groups the recommendations into five categories of possible mechanisms for their implementation:

- (a) regular technical work of WHO according to its normative functions (around 44 recommendations could be implemented under this category);
- (b) existing frameworks (obligations under the International Health Regulations (2005) and World Health Assembly resolutions/decisions) (around 19 recommendations);
- (c) amendments to or building on existing frameworks (International Health Regulations (2005) and World Health Assembly resolutions/decisions) (around 26 recommendations);
- (d) new WHO international agreement(s)/instrument(s) (around 30 recommendations);
- (e) addressed by or through involvement of external bodies/actors (around 12 recommendations).

Analyses on legal, financial and partnership aspects of WHO's work on preparedness for and response to health emergencies

28. Following a request from the Bureau of the Working Group, the Secretariat prepared three additional background documents to support the discussions:

¹ Update of the preliminary findings from COVID-19-related recommendation mapping. Third meeting of the working group on strengthening WHO preparedness and response to health emergencies. Geneva: World Health Organization; September 2021 (https://apps.who.int/gb/wgpr/pdf_files/wgpr3/A_WGPR3_5-en.pdf, accessed 1 December 2021).

(a) Document A/WGPR/3/3¹ summarizes WHO's collaboration with other entities in the United Nations system that operate during a health emergency, including those in the framework of existing networks and coordination mechanisms, with a particular focus on the COVID-19 response. It outlines the work of the United Nations Crisis Management Team for the COVID-19 response; the COVID-19 Partners Platform; the Inter-Agency Standing Committee mechanism; the United Nations framework for the immediate socioeconomic response to COVID-19; the Emergency Global Supply Chain System (COVID-19); and the Global Outbreak Alert and Response Network.

(b) Document A/WGPR/3/4² provides an overview of the funding mechanisms that have been applied to the COVID-19 response, including: the contingency funding for emergency response, reprogramming of existing official development assistance funding, increased bilateral funding, multilateral funding, and private sector financing and investment; the funding streams that are required for future health emergency preparedness and response; and potential new funding mechanisms that are currently under discussion for sustained, predictable funding for health emergency preparedness and response.

(c) Document A/WGPR/3/6³ provides an analysis for consideration by the Working Group to further identify the incentives for a new instrument on pandemic preparedness and response, and on the options for strengthening the effectiveness of the International Health Regulations (2005), including a consideration of the benefits, risks and legal implications. The document also details the types of instruments available to the Health Assembly under the Constitution of the World Health Organization.

ACTION BY THE EXECUTIVE BOARD

29. The Board is invited to note this report, and provide further guidance on the continued strengthening of WHO's capacity to prepare for, prevent and respond to emergencies.

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¹ WHO collaboration with United Nations entities that operate during a health emergency, with a focus on the COVID-19 response. Third meeting of the working group on strengthening WHO preparedness and response to health emergencies. Geneva: World Health Organization; September 2021 (https://apps.who.int/gb/wgpr/pdf_files/wgpr3/A_WGPR3_3-en.pdf, accessed 1 December 2021).

² Funding streams for health emergency preparedness and response in the context of COVID-19. Third meeting of the working group on strengthening WHO preparedness and response to health emergencies. Geneva: World Health Organization; September 2021 (https://apps.who.int/gb/wgpr/pdf_files/wgpr3/A_WGPR3_4-en.pdf, accessed 1 December 2021).

³ Member States Working Group on Strengthening WHO Preparedness for and Response to Health Emergencies (WGPR): Secretariat analysis for consideration by the Working Group to further identify the incentives for a new instrument on pandemic preparedness and response and the options for strengthening the effectiveness of the International Health Regulations (2005), including a consideration of the benefits, risks and legal implications. Third meeting of the working group on strengthening WHO preparedness and response to health emergencies. Geneva: World Health Organization; September 2021 (https://apps.who.int/gb/wgpr/pdf_files/wgpr3/A_WGPR3_6-en.pdf, accessed 1 December 2021).