WHO POSITION PAPER

Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond

World Health Organization

World Health Organization

WHO POSITION PAPER

Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond

WHO/UHL/PHC-SP/2021.01

Suggested citation. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021 (WHO/UHL/PHC-SP/2021.01). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

Sales, rights and licensing. To purchase WHO publications, see http://apps.who.int/bookorders. To submit requests for commercial use and queries on rights and licensing, see http://www.who.int/about/licensing.

Contents

Acknowledgements

This position paper was developed through collaboration between headquarters and all regional offices of WHO, under the leadership of Zsuzsanna Jakab (Deputy Director-General, WHO) and Mike Ryan (Executive Director, WHO Health Emergencies Programme) with further guidance from Jaouad Mahjour (Assistant Director-General, Emergency Preparedness, WHO).

The responsible technical and coordination team comprised Sohel Saikat, Marc Ho, Dheepa Rajan and Andre Griekspoor and was led by Suraya Dalil, Stella Chungong and Gerard Schmets.

At the regional level, leadership and coordinated contributions were provided by directors and leads responsible for programme management, universal health coverage and life course, and health emergencies: Natasha Azzopardi-Muscat, Jarbas Barbosa da Silva (Junior), Joseph Cabore, James Fitzgerald, Rana Hajjeh, Melitta Jakab, Awad Mataria, Pem Namgyal, Dorit Nitzan, Martin Taylor, Prosper Tumusiime, Jos Vandelaer, Liu Yunguo, Felicitas Zawaira.

Reviewers and contributors from WHO headquarters and regional offices: Pascale Abie, Hala Abou Taleb, Benedetta Allegranzi, Sophie Amet, Roberta Andraghetti, Ali Ardalan, Ian Askew, Anshu Banerjee, Anil Bhola, James Campbell, Alessandro Cassini, Jorge Castilla, Ogochukwu Chukwujekwu, Giorgio Cometto, Peter Cowley, Sofia Dambri, Neelam Dhingra-Kumar, Khassoum Diallo, Abdul Ghaffar, Ann-Lise Guisset, Lynne Harrop, Qudsia Huda, Humphrey Karamagi, Masaya Kato, Rania Kawar, Edward Kelley, Devora Kestel, Hala Khudari, Joseph Kutzin, Yue Liu, Mwelecele Malecela, Paul Marsden, Robert Marten, Nikon Meru, Hernan Montenegro Von Mühlenbrock, Saqif Mustafa, Matthew Neilson, Hyppolite Ntembwa, Denis Porignon, Adrienne Rashford, Tomas Roubal, Cris Scotter, Redda Seifeldin, Kabir Sheikh, Zubin Shroff, Ian Smith, Rajesh Sreedharan, Shamsuzzoha Syed, Regina Titi-Ofei, Anthony Twyman, Jun Xing, Kenza Zerrou, Yu Zhang, Zandile Zibwowa.

Acronyms

AAR	after-action review
ACT	Access to COVID-19 Tools
CGH	common goods for health
COVID-19	coronavirus disease
CPRP	COVID-19 country preparedness and response plans
EPHF	essential public health functions
FCV	fragility, conflict and violence
GDP	gross domestic product
GPW13	WHO's Thirteenth General Programme of Work
IAR	intra-action review
IHR (2005)	International Health Regulations (2005)
NAPHS	National Action Plan for Health Security
NHSP	national health sector policies
PHC	primary health care
PPE	personal protective equipment
SDG	Sustainable Development Goal
SPRP	Strategic Preparedness and Response Plan
UHC	universal health coverage
UHC 2030	International Health Partnership for UHC 2030
UN	the United Nations
WHA	World Health Assembly
WHO	World Health Organization

© WHO / Lindsay Mackenzie

Executive summary

Novel coronavirus disease (COVID-19) has had a wide-ranging impact on all areas of society, leading to setbacks in health gains and efforts to achieve universal health coverage (UHC). The diversion of health system resources to address COVID-19 care led to a protracted disruption of essential health services. New barriers to the demand for health care, such as restricted movements, reduced ability to pay and fear of infection, have posed additional and unprecedented challenges, to say nothing of the stark reality, in many settings, of insufficient infection prevention supplies and testing capacity.

The world has not learned from previous epidemics, and overreliance on reacting to events as they occur, rather than on prevention and preparedness, has meant that countries were caught unprepared for a pandemic of this speed and scale. Unfortunately, the pandemic has also hit vulnerable populations particularly hard, and COVID-19 has exacerbated pre-existing inequalities even further.

UHC and health security are complementary goals; this position paper provides a rationale and recommendations for building resilience and seeking integration between promoting UHC and ensuring health security by the following means:

- recovery and transformation of national health systems through investment in the essential public health functions (EPHF)[i] and the foundations of the health system, with a focus on the primary health care (PHC) and the incorporation of health security;
- all-hazards emergency risk management, to ensure and accelerate sustainable implementation of the International Health Regulations (2005) (IHR 2005);
- whole-of-government approach to ensure community engagement and whole-of-society involvement.

This paper provides leaders and policy-makers at national and local levels with the following recommendations for the medium and long term, positioning health within the wider discussions on socioeconomic recovery and transformation:

1. **Leverage the current response to strengthen both pandemic preparedness and health systems:** this includes using results from intra-action and after-action reviews (IAR/AAR) and multisectoral reviews to inform sustained investment in health system strengthening; identifying and mapping existing resources and weaknesses in capacities to determine priority needs; updating country preparedness and response plans and socioeconomic recovery

i Also recently referred to, from an economic perspective, as "common goods for health", see: Common goods for health. In: www.who.int [website]. Geneva: World Health Organization; 2020 (https://www.who.int/health-topics/common-goods-for-health#tab=tab_3, accessed 7 November 2020).

plans; embedding policies and planning for emergency management within wider efforts to strengthen health systems; and ensuring wider stakeholder participation in intra-action and after-action reviews underpinning One Health approach.

2. **Invest in essential public health functions including those needed for all-hazards emergency risk management:** this includes increasing investment to address critical gaps in EPHF; conducting EPHF and IHR capacity assessments as part of multisectoral reviews of health system and public health capacity; strengthening health and public health professionals' competencies in the EPHF and their role in emergency management; and conducting policy dialogue to promote the embedding of EPHF in administrative structures.

3. **Build strong Primary Health Care foundation**: this includes ensuring strong political commitment and leadership to place PHC at the heart of efforts to attain UHC, health security and the United Nations Sustainable Development Goals; implementing health services planning and organization modalities that promote quality, people-centred primary care and the EPHF at their core; ensuring adequate and sustainable quality, competency levels and distribution of a committed and multidisciplinary PHC workforce; ensuring that health system financing arrangements that prioritize essential services and PHC appropriately; and investing in safe, secure, accessible and sustainable PHC facilities that provide high-quality services.

4. **Invest in institutionalized mechanisms for whole-of-society engagement**: this includes reviewing existing mechanisms for the whole-of-society engagements; developing institutional and legislative instruments to mobilize whole-of-government and whole-of-society resources; advocating, mainstreaming and monitoring whole-of-society approaches in emergency preparedness, response, essential health services and recovery efforts; developing health workforce capacity for engagement with and empowerment of the population; adapting policies and planning with monitoring and accountability, underpinned by national legislation, to mandate the role of and support for local governments; and supporting global mechanisms to ensure equitable access to products in limited supply.

5. **Create and promote enabling environments for research, innovation and learning**: this includes enabling regulatory environments; maintaining and adapting innovative models implemented during the pandemic encompassing infodemics; providing regulatory support to facilitate inter-country and intra-country information

management, data-sharing and coordination; and promoting research, innovation and learning in all-hazards emergency risk management and health system resilience.

6. **Increase domestic and global investment in health system foundations and all-hazards emergency risk management**: this includes identifying existing capacities to determine the needs for long-term health system strengthening to maintain essential health and social services including non-communicable diseases and mental health and health emergency preparedness; creating legislation and policy frameworks to increase and sustain the fundamental requirements for health systems and emergency preparedness; prioritizing investment and financing for public health and health security with consideration for countries under protracted instability and fragile systems and governance, based on identified capacity gaps and lessons learned; including investment in health systems, resilience and emergency preparedness of the agenda for regional cooperation bodies' investment planning; and leveraging investment in non-health sectors to support the strengthening of public health capacity.

7. **Address pre-existing inequities and the disproportionate impact of COVID-19 on marginalized and vulnerable populations**: this includes guaranteeing access to safe and high-quality health care by mobilizing additional public funds and safeguarding and extending coverage of health protection and health care provision mechanisms; ensuring engagement, participation and considerations of vulnerable socioeconomic groups; supporting financial protection for vulnerable populations by pursuing social protection policies to ensure income security; monitoring inequities in health and access to health care to inform policies, planning and investment; and, in fragility, conflict and violence (FCV) settings, exploring common concerns, challenges and opportunities to strengthen the FCV triple nexus, defined as fostering strategic and operational connections between development and humanitarian programming and linking with peace-building.

WHO will collaborate with its Member States, the United Nations and other partners to support the implementation of the above recommendations, within the remit of the UN Framework for the Immediate Socio-economic Response to COVID-19. At national level, the role of WHO country offices will be pivotal, bolstering multisectoral, government-led socioeconomic recovery and transformation processes. WHO will also support ministries of health in bringing together other line ministries, partners, civil societies, voluntary sectors (both for profit and not for profit), to promote the health agenda and resource mobilization for PHC, EPHF and emergency preparedness.

This will complement and, where appropriate, be integrated with ongoing pandemic preparedness and response planning.

WHO will harness the lessons learned from COVID-19 and adopt good practices. Moving forward, it will review and improve existing mechanisms for assessment, monitoring and reporting of country capacities and progress. WHO will continue to support strategies to address critical foundational weaknesses of health systems in countries with FCV settings.

I.
Introduction

As of the 23rd of June 2021, over 178 million people across the world have been infected by the novel coronavirus SARS-CoV-2, causing 3,880,450 deaths (*1*). The pandemic of novel coronavirus disease (COVID-19) has had far-reaching consequences for all parts of society, causing unprecedented disruption of health services as national authorities struggle to cope. Stringent public health and social measures as a response to the current pandemic have grossly affected lives and livelihoods, plunging the world economy into recession, to an estimated amount of US$ 8.8 trillion (2020–2021), not to mention record unemployment (*2*).

Progress made in many countries towards United Nations Sustainable Development Goal (SDG) 3 has not only stalled, but even threatens to regress, as health stewards are simultaneously confronted with the pandemic response, health system recovery and long-term development challenges *(3)*.

Even countries scoring well on traditional health security and universal health coverage (UHC) measures have struggled with responding to and managing the risks of this pandemic *(4)*. The burden of this struggle has been borne disproportionately by the most vulnerable communities in all countries.

Indeed, the price the entire global community has paid is high. Preliminary estimates suggest the total number of global deaths attributable to the COVID-19 pandemic in 2020 due to, for example, interrupted vaccination programmes, maternal and child health services and noncommunicable disease and mental health programmes is at least 3 million *(5)*. A WHO survey reported that 36 out of 70 countries had experienced disruptions in over 50% of their essential health services. This is exacerbated by new barriers to demand, such as restricted movement to contain the spread of COVID-19, reduced ability to pay and fear of becoming infected. As more evidence becomes available, it is probable that excess morbidity and mortality from non-COVID-19 conditions will be found to compare COVID-19 figures *(6, 7)*.

The pandemic has hit populations in situations of fragility, conflict, violence (FCV) and other vulnerabilities particularly hard; those affected include refugees and internally displaced populations, homeless people, elderly, people living in informal settlements or dependent on the informal sector for survival and high-risk communities exposed to other threats, including natural hazards and the impact of climate change. The adverse effects are mostly caused by increased barriers to accessing essential health services and the lack of socioeconomic safety nets. This is a particular threat for the estimated 25% of the global population living in FCV settings, where 60% of preventable maternal deaths, 53% of deaths in children under 5 years and 45% of neonatal deaths occur. Health systems in these FCV settings were already struggling to meet basic health needs even before the pandemic; now, the significant impact of containment measures on lives and livelihoods as well as on barriers for utilization of health services, has exacerbated the complex social, political and security contexts and made disease control, continuity of health service delivery, food security and

inclusive governance into an even greater challenge.

It is thus becoming increasingly clear that traditional efforts to strengthen health systems, previously considered the principal means of achieving UHC, have not ensured adequate investment in common goods for health (CGH): those essential public health functions (EPHF) that only governments can finance, because they are either public goods or have large market failures. These include the implementation of the International Health Regulations (2005) (IHR 2005).[i] Countries have also relied too heavily on reacting to events as they occur, rather than taking proactive action to prevent, prepare for and reduce the risks of disasters and emergencies in communities. The global prioritization of the preventive action needed to ensure health security is described in the 2019 annual report of the Global Preparedness Monitoring Board, which laments: "despite significant progress in assessing deficiencies and developing plans, not a single National Action Plan for Health Security (NAPHS) has been fully financed" *(8)*. A 2018 survey on pandemic preparedness also found that, of the 54% of Member States that responded, 88% had national pandemic influenza preparedness plans, but almost half of these (48%) had been developed before the 2009 H1N1 pandemic and had not been updated since *(9)*.

The countries who were better able to contain the virus with less collateral economic damage seem to be the ones that could draw on an effective public sector and on a form of governance that emphasized engagement of populations, communities and civil society *(10, 11, 12, 13, 14, 15*). Based on observations from evolving evidence, countries that had made limited progress in UHC with health security seemed generally less able to repurpose their capacities toward epidemic treatment, and their normal services were more easily compromised (*16*).

Universal health coverage and health security: two sides of the same coin

These insights underscore the fact that UHC and health security are two sides of the same coin *(17, 18, 19)* – two complementary health goals towards which all countries should steer: people able to use essential services when they need them, including during emergencies, without suffering financial hardship. Despite the inherent synergies and overlaps in the actions needed to reach those goals, the approach to date at both global and national levels has been fragmented *(20)*.

A primary health care (PHC) approach in tandem with EPHFs are not only critical to achieve UHC but also to health

i The legally binding International Health Regulations (2005) support countries in managing emergencies through stronger national capacities for preparedness and response in ways that are commensurate with, while being restricted to, public health risks, avoiding unnecessary interference with international traffic and trade.

security. PHC is the first point of contact between individual, communities health and national systems so constitutes critical interface with health security and a precursor to health emergencies. Besides offering a strong orientation for efforts to strengthen health systems, the PHC-for-UHC approach supports health security by preventing outbreaks through immunization and maintenance of essential health and social care services while hospitals are overwhelmed *(21, 22)*. The PHC approach also aims to reduce all health risks and address determinants of health; it thus lays the foundation for all-hazards emergency risk management, whereas emergency response relies on existing treatment capacities to scale up epidemic treatment and existing community engagement for risk communication.

Countries now have a momentous window of opportunity to do things differently and fulfil their commitment to strengthening health systems, building on the PHC approach and investing in EPHFs. The COVID-19 pandemic has brought a huge political impetus and grassroots awareness to make health and resilience a top political priority. The global health community's current challenge is thus to fully leverage this attention to ensure that, in recovering and building better during and beyond COVID-19, countries reform, transform and upgrade their health systems and communities with both health security and UHC in mind.

While chronic under funding is common in many countries, there are countries where resources are not the only barrier. The cost of ensuring UHC and health security in 67 countries, as calculated by WHO, is extremely low compared with the cost of a crisis such as the current pandemic or future threats, including climate change *(23, 24, 25, 26, 27)*. Further estimates concur that improving emergency preparedness is very affordable, with estimates ranging from less than US$ 1 per person per year in low- and middle-income countries *(28)* to between US$ 1 and US$ 5 per person per year *(29)* – considerably less than any health emergency response. It means that countries can build resilience by investing in governance, key preparedness and response capacities and PHC as the foundation for addressing the population's essential health needs, while protecting the population from emergencies. In the end, the synergies gained by addressing UHC and health security simultaneously leave us collectively better off, from both a financial and a health point of view.

Objective of the paper

This WHO position paper provides a **rationale and recommendations for building resilience** by seeking integration between promoting UHC and ensuring health security through:

- recovery and transformation of national health systems through investing in strengthening EPHF, and the foundations of the health system, with a focus on the PHC and the incorporation of health security;
- all-hazards emergency risk management, to ensure and accelerate sustainable implementation of IHR (2005);
- inclusive governance to ensure community engagement and whole-of-society involvement.

The overarching axiom will be to move away from "panic and neglect" towards "building back better". The timescale for the recommendations is the medium and long term. The paper will build on and complement WHO's strategic and operational support for the ongoing preparedness and response efforts and early recovery needs *(30)*.

Approach applied to develop the Position Paper and its Brief

The development of this WHO position paper drew from existing work, guidance and expertise within WHO through extensive consultations and reviews at headquarters and regional levels. The consultative process applied led to a compilation of key lessons from the COVID-19 pandemic and past events, which informed the development of policy and allied recommendations and the role of WHO with stakeholders in relation to building resilient health systems. Following the development of this Position Paper, a Position Brief was developed to provide a more concise version, mainly targeting heads of governments, ministries of finance and other leaders within and outside the health sector. The key messages to various stakeholders, summarized in the Position Brief also reflect the expertise, experiences and consensus between the WHO leadership and technical experts working on promoting an integrated approach to making health systems resilient for the achievement UHC and health security in tandem.

This paper is also complementary to, and synergistic with, recent joint publications on recovery and transformation. These include the revised COVID-19 Strategic Preparedness and Response Plan (SPRP), and the UN Framework for the Immediate Socio-economic Response to COVID-19, which lays out the principal elements of a positive recovery process *(31)*. This paper sets out WHO's vision for a transformed health sector which has taken the lessons of COVID-19 seriously, within the framework set out by the United Nations for a socially just society and an equity-conscious economy. Also, the WHO Manifesto for a healthy recovery from COVID-19 gives us a sharp reminder that environmental determinants are the root cause of the current pandemic and need to be addressed as well *(32)*. It is aligned with the Primary Health

Care Operational Framework *(33)* and contributes to all objectives of the three bold targets of the WHO 13th General Programme of Work (GPW13) *(34)*. This paper also complements ongoing initiatives to review national pandemic preparedness and UHC, to inform planning and interventions for building back better. Such initiatives include the Assessment of Gaps in Pandemic Preparedness presented to G20 Leaders, and Universal Health and Preparedness Review Mechanism (*forthcoming*).

Target audience

This paper targets leaders and policy-makers at national and local levels. It includes key stakeholders, including national public health institutes, civil society, private (both for profit and not for profit) sector, parliamentarians, emergency managers, humanitarian and development partners and the United Nations community, in addition to those working in ministries and other sectors that support health.

© WHO

II.
Lessons from the COVID-19 pandemic

Countries must build on investments made and lessons learned during the COVID-19 pandemic in order to create a "new normal" of renewed health policies and systems. Some of the lessons learned during the COVID-19 response are listed below to inform recommendations and policy orientations for recovery and transformation.

All countries need to improve their organization and functioning of health systems and beyond for pandemic preparedness: before the pandemic, most national health systems had been able to function adequately with only basic preparedness measures in place to address more frequent but small-scale emergencies. This had led to complacency, resulting in gaps in EPHF and capacities necessary for IHR (2005) implementation *(35)*. Moreover, countries had not adequately anticipated or planned for national emergencies exceeding those capacities, nor for the resulting disruption to essential health services. This led to inadequate governance, coordination and incident management as well as gaps in clinical management pathways, standards of care, infection prevention and control, and the ability to flexibly deploy workforce to areas of greatest need. This was true even of countries that were considered to have mature health systems and advanced IHR core capacities.

Maintaining essential health services must be considered just as high a priority as ensuring the emergency response. Initial pandemic preparedness and response strategies limited to give adequate attention to the potential significant disruption of essential services due to repurposing of health system capacity and the introduction of new public health and social measures. Some of the enormous strain that COVID-19 placed on secondary and tertiary services could have been avoided *(36)*. Some PHC-oriented health systems have demonstrated resilience, quickly adapting and maintaining essential services by rebalancing clinical loads across levels of care, including the roles of different levels health services delivery in detecting cases early, managing simpler cases close to the community and employing triage to protect hospital capacity. This also reduces excess non-COVID-19 morbidity and mortality. Primary care services are often also the entry point to the health system; surveillance linked with diagnostics is crucial at this level.

Countries need to invest in addressing foundational health system gaps and essential public health functions for emergency management: COVID-19 has put a spotlight on chronic foundational gaps in health systems that have made service delivery vulnerable to disruption and a potential risk factor in transmission (e.g. poor adherence to infection prevention and control and water, sanitation and hygiene standards and chronically understaffed health facilities as well as functions such as contact tracing, quarantine, isolation and resilient supply chains). It highlighted weak PHC orientation of many systems including fragmented care, hospital-centric systems, low levels of health literacy, and the lack of effective health emergency management systems, including education, basic training and professional development in emergency preparedness

and response for health and social care workers and managers, including the adoption of flexible roles. These health system elements are essential for achieving UHC and health security.

Governance and leadership are critical for effective emergency risk management with multisectoral coordination: governments that acknowledged the health threat early, had populations that trusted their leadership, made decisions based on available evidence and coordinated preparedness and response across sectors seemed to do better in stemming community transmission. Successful measures included pooling resources across line ministries, private sectors and employing effective coordination structures. Decentralized multisectoral risk and emergency management, embedded in local structures and using the PHC approach, allowed much needed flexibility at local levels to address the constantly evolving situation effectively. Fragmentation in the organization and governance of key health system functions, as well as in financing and coverage arrangements, undermines leads to leadership hesitancy and the ability to engage in a population-based response. In countries where health coverage arrangements were fragmented and dependent on specific financial contributions, there was a lack of resilience to the economic shock of COVID-19, leading to a loss of coverage. Key cross-cutting functions (e.g. surveillance) and systems (e.g. information) are needed across programmes and schemes.

Building and maintaining public trust through community engagement and participation is key: trust in governments, public services and health systems represents social capital built up over time through active two-way communication and engagement with populations, communities and civil society. Clear, consistent and reliable risk communication and proactive dialogue with communities helped to reduce public dissatisfaction and infodemics and increase their willingness to participate. Longstanding community health worker programmes and initiatives to build community resilience served as reliable platforms to contextualize measures to meet local needs. Local risk management approaches and community-based surveillance systems for seasonal threats also helped in developing effective interventions.

Global emergencies compromise the scope for external support and resources as each country struggles with its own national response: the pandemic laid bare the impact of a large-scale emergency which simultaneously exceeds individual national capacities and rapidly overwhelms all countries at once. Unlike localized and regional public health emergencies, this situation leads to reduced external support for the countries most in need. The problem is exacerbated by severe global shortages and competition for critical resources, such as personal protective equipment (PPE), reagents and medicines.

Technology and new ways of organizing health services are playing a stronger role in providing alternative platforms for health service delivery and epidemic response: COVID-19 has shown how health systems must catch up with society in using innovative methods and new technologies. The demand for telemedicine existed before the pandemic, but its adoption has been accelerated to reduce health worker and patient contact and interruptions in treatment. Many countries' manual contact tracing attempts have been complemented by app-based solutions *(37)*. Social media have been a major source of both credible information and misinformation; governments with community participation must learn to navigate them faster and more effectively. As such, there is a need to balance between the opportunities and challenges that the technology revolution era brings.

COVID-19 has magnified inequity, health and socioeconomic disparities, disproportionately impacting marginalized and vulnerable people: COVID-19 has uncovered and exacerbated pre-existing health and socioeconomic inequalities within societies arising from the impact of stringent measures that have disrupted both the formal and the informal economy *(38)*. According to the International Labour Organization, 1.6 billion workers in the informal economy – nearly half the global workforce – are at risk of losing their jobs *(39)*. The global community needs to accelerate progress urgently in building social protection packages that embed UHC in social protection to ensure financial protection and access to essential health services, employment and social welfare benefits, leaving no one behind. Moreover, the macroeconomic and fiscal implications of the COVID-19 pandemic may persist for years, threatening to compromise past progress towards UHC. In response to the pandemic, countries have increased health and social spending while public revenues have fallen, leading to growing fiscal deficits and increasing debt burdens. This may constrain the amount that governments can spend on health. Protection of access to health care for the poor and protection against financial hardship will remain critical priorities.

Emergency risk management is a common good for health and needs to be publicly funded and organized: public governance of health systems, with predominant reliance on public funding sources, is essential to enable progress towards UHC and health security. Where these are inadequate, there is a high risk of exacerbating pre-existing inequalities in access, particularly when independent or private providers and insurers can set their own prices or exclude the persons in greatest need *(40)*. Similarly, at the global level, the restrictions in global transport have led to supply chain constraints and, in some cases, inadequately managed market mechanisms have resulted in limited supplies being allocated to the highest bidder rather than to those with the greatest need. This has also been a major problem in the roll-out of COVID-19 vaccines worldwide.

© WHO

III.
Policy recommendations and actions to build resilient communities and PHC-based health systems

The world has faced health threats and emergencies before, including the outbreaks of severe acute respiratory syndrome, Middle East respiratory syndrome coronavirus, pandemic influenza A (H1N1) and Ebola virus disease. However, there has been lack of sustained programmatic approach to recovery to build resilience in health systems and communities, maintain EPHF and strengthen emergency preparedness and response capacities. Funding and political impetus usually decline soon after the response phase, with poor integration with longer-term recovery and transformation.

WHO calls on countries to take action towards recovery and transformation of their national and subnational health systems. This can be achieved by investing in and strengthening EPHF and an all-hazards risk management approach, including implementation of IHR (2005) and PHC-based health systems with whole-of-society involvement to achieve UHC and health security. To ensure functionality of health systems during emergency response and recovery, fundamental requirements must be in place.

WHO proposes the following policy recommendations and actions for countries to inform planning, investment and interventions by all relevant stakeholders, to build resilient communities and PHC-based health systems. These will be relevant to ongoing preparedness and response to control the epidemic and mitigate the effect on high-quality essential services, so that this investment will lay the foundation for medium- to longer-term post-COVID-19 recovery and transformation for resilience.

Investment in health system recovery and transformation will not only be cost-effective, reducing the health and socioeconomic impact of future pandemics, which are likely to happen more frequently than in the past; they will also reduce the risks and impact of smaller-scale but more frequent epidemics and shocks, and also contribute in general to better health for all and bring macroeconomic and social benefits.

1. Leverage the current response to strengthen both pandemic preparedness and health systems

Given the protracted nature of COVID-19, current investment in preparedness and response needs to be institutionalized and converted into early recovery and transformation activities for the longer-term. This will ensure that response interventions during the pandemic contribute to medium- and longer-term national and subnational capacity-building for emergency risk management and continuity of essential health services. This early recovery should be informed by the existing risks, gaps, priorities and reforms, as already identified before the pandemic, for example through country risk profiles, IHR monitoring and evaluation framework assessments, national action plans for health security (NAPHS) and national health sector policies (NHSP), and aligned with an

all-hazards emergency risk management approach.

This early recovery approach should be integrated into ongoing preparedness and response plans and guidance, e.g. through revised COVID-19 country preparedness and response plans (CPRP) which, in turn, should provide the foundation for a "health first" approach in socioeconomic response plans, as per the UN Framework for the Immediate Socio-economic Response to COVID-19.

Actionable recommendations

- Use the results of IARs and AARs *(41)* and multisectoral reviews of the health and socioeconomic impact of COVID-19 to inform sustained investment in health system strengthening, integrating all-hazards risk management and emergency preparedness.
- Identify existing resources and weaknesses in capacity to determine priority areas of need. This would strengthen capacity to provide high-quality, resilient services for other conditions, including life-course-specific diseases, communicable diseases, noncommunicable diseases and mental health conditions. This also includes infection prevention and control to ensure the safety of the health workforce, patients and communities.
- Where needed, update CPRP and socioeconomic recovery plans to include early recovery approaches and ensure related additional investment as required.
- Embed policies and planning for emergency management in wider efforts to strengthen health systems (and vice versa), by applying an integrated approach to UHC and health security policy-making and subsequent planning.
- Ensure participation of health systems, stakeholders in emergency preparedness and response, other sectors and community partners in IARs and AARs, so that response experiences influence sustainable capacities for a more resilient system.

2. Invest in essential public health functions, including those needed for all-hazards emergency risk management

EPHF include surveillance, governance/financing, prevention, health promotion and risk reduction, health protection/legislation, public health research and human resources, procurement and access to essential medications, laboratory capacities and supply and logistics chains, recognizing contextual differences in their application *(42)*.

To invest in EPHFs across different sectoral structures and all levels of the health system, countries may consider the following actionable recommendations.

Actionable recommendations

- Increase domestic and global investment to address critical gaps in EPHFs, particularly those necessary

for the implementation of IHR (2005) using an all-hazards risk management approach.

- Conduct EPHF and IHR capacity assessments as part of multisectoral reviews of health system and public health capacity in the context of COVID-19.
- Strengthen health and public health professional competencies in EPHF and their role in risk and emergency management (integrated where appropriate with broader health workforce planning). This includes working with and promoting the stewardship of national public health institutes that are often custodians of many EPHFs.
- Conduct policy dialogues on EPHF, to be embedded in administrative structures from national to local levels, with a robust foundation for PHC, especially those with critical interdependencies with health, in order to promote awareness.
- Implement the 'safe health facilities' programme at all three levels of the health system.

© WHO / Lorenzo Pezzoli

3. Build strong Primary Health Care Foundation for resilient health systems for UHC, the health-related SDGs and Health Security

While PHC is recognized as a cornerstone for achieving UHC, in line with the Astana Declaration *(43)*, there is a need for more explicit recognition of the role of PHC in all-hazards emergency risk management and the building of resilient health systems and communities. PHC is rooted in a commitment to social justice, equity, solidarity and participation. It is based on the recognition that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction. Emerging evidence indicates that PHC and associated hospital reform can contribute significantly to health security, improving the responsiveness of health systems through the provision of integrated public health and primary care capacity in the front line *(44, 45, 46, 47)* combined with high-quality hospital services. PHC should be the main community interface with the health system, where all-hazards emergency preparedness efforts can begin to build community resilience *(48).* Many countries' responses have been focused on expanding intensive-care hospital capacity for severe COVID-19 patients. Although this is hugely significant, a large proportion of the health services needed by those affected have been provided through primary care and community services, which is essential to ensure

the safety of staff and patients and the continuity of essential and routine health care.

Actionable recommendations

- Sustain strong political commitment to and leadership of health system strengthening, with PHC at the heart of efforts to attain UHC, health security and the SDGs (*43*). This includes defining and implementing benefits packages for health services, supported by appropriate financing and workforce policies; developing policy frameworks and regulations; building multisectoral governance and partnerships; and promoting community leadership and accountability of providers and policy-makers to the public. This should be aligned with national health sector strategic planning
- Implement modalities of care that promote quality, people-centred primary care and EPHF as the core of integrated health services provided by both public and private sector providers and across both sectors. Incorporate digital technologies for health in ways that facilitate access to care and service delivery, improve efficiency, promote accountability, support continuity of care and two-way risk communication with communities and households.
- Ensure adequate and sustainable numbers, competency levels and distribution of a committed, multidisciplinary PHC workforce that includes facility-, outreach- and community-based health workers and support them in preparing and responding more effectively to emergencies while maintaining essential health services.
- Ensure that health system financing arrangements appropriately prioritize essential services in alignment with the 2019 UN High Level Declaration on UHC which recommends that at least an additional 1% of GDP spent into PHC, so that the inputs available are sufficient to enable high-quality care and services and that entitlement conditions support equity in access. Promote purchasing and payment systems that foster a reorientation in models of care towards greater prevention and promotion and towards care that is more coordinated across the continuum of care and delivered closer to the places people live and work.
- Invest in safe, secure and accessible primary care facilities to provide high-quality services with reliable water, sanitation, waste disposal/recycling, cold chains, medical supply chains, diagnostic facilities/laboratories, telecommunications connectivity and power supply, and with transport systems that can connect patients with other care providers.

4. Invest in institutionalized mechanisms for whole-of-society engagement

In many countries, including high-income countries, health governance

has not included adequate and regular mechanisms for engaging with populations, communities and civil society that can be utilised during emergencies. Acknowledging that health needs to be integrated within broader societal functions, the proposed transformation should be based on a whole-of-society approach with monitoring and accountability. Mechanisms established for the One Health approach, involving collaboration with the animal health, food, livestock and environment sectors, can form the basis for broader, multisectoral coordination platforms for all-hazards emergency risk management and public health. For example, food systems that can continue to function in emergencies are essential, and a robust surveillance system across sectors would improve detection and early warning of zoonotic diseases and outbreaks. This approach can be harnessed beyond the emergency response phase and mainstreamed into recovery and wider health system strengthening efforts, including those conducted at subnational level.

Countries must invest in institutionalizing mechanisms for cross-sectoral and cross-disciplinary coordination and decision-making, for use in both normal and emergency situations. This would foster a formalized multisectoral governance culture that includes accountability. Communities also serve as the foundational systems for resilience. This engagement is thus important for community resilience, improve trust in governments and encourage compliance with public health and social recommendations during emergencies and foster a formalized culture of multisectoral governance and community participation. As well as a national-level whole-of-government approach, the pandemic has also underscored the need for global cooperation, empathy and solidarity between countries and partners.

Actionable recommendations

- Review existing mechanisms for whole-of-society action, including expanding multisectoral approaches to health system strengthening and emergency management, community engagement, empowerment and multi-stakeholder governance at all levels of administration.
- Develop policy, legislative and regulatory instruments to employ whole-of-government and whole-of-society (including private sector such as private healthcare providers) resources to support public health emergency preparedness, response and recovery efforts, including capacity-building for future threats and resilient health systems and communities.
- Advocate, mainstream and monitor whole-of-society approaches in emergency preparedness, response and recovery efforts through integrated policies, planning (e.g. NHSP, NAPHS) and budgeting,

at national and subnational levels. This includes dialogue with parliamentarians, allied ministries and non-State actors (trades unions, faith groups, private sector entities, civil society, academia, etc.) to identify sources of investment and untapped technical expertise.

- Develop health workforce capacity for engagement with and empowerment of the population, community and faith groups, civil society, etc.
- Develop mechanisms to improve the transmission of timely and accurate information, and the prevention, detection and response to misinformation.
- Adapt policies and planning, underpinned by national legislation, to mandate local governments' and municipalities' role in and support for public health, including active involvement of and participation by local authorities.
- Expand cross-border and international collaborations and support global mechanisms to ensure equitable access to limited products, including PPE, vaccines, diagnostics and therapeutics (e.g. the Access to COVID-19 Tools (ACT) Accelerator).

5. Promote enabling environments for research, innovation and learning

COVID-19 has required governments worldwide to take proactive action in the health sector, including innovative and flexible approaches to health service delivery and models of care. The pandemic has also driven research and innovation opportunities across the life sciences, digital health, medical technologies, vaccine development, therapeutics and diagnostics and in self-care modalities. While much of the current investment in research, innovation and learning (including the use of digital platforms) is designed to support ongoing preparedness and response and the maintenance of safe service delivery, much of it may also help to make longer-term service delivery and risk management more efficient and effective.

Countries will need to maintain an enabling environment to advance these developments, while also managing the evolving risks and challenges associated with them (e.g. privacy and inequity concerns). This includes allocation of resources for research in preparedness and resilience; development of platforms for multi-stakeholder (i.e. government/academia/community/industry) coproduction of evidence; and strengthening of research uptake in policy processes.

Actionable recommendations

- Enable regulatory environments, such as intellectual property frameworks, and incentives and ethical requirements for innovation, e.g. data privacy and protection.
- Maintain, adapt and scale innovative models implemented during the pandemic to facilitate continuity, access, quality, equity

and utilization of health services while ensuring accountability and risk communication. These include digital technologies and platforms for health, telemedicine and the use of "big data" for public health through advanced data analytics and artificial intelligence.

- Provide regulatory support to facilitate inter- and intra-country information and data-sharing and coordination for public health, including data security and utilization of data for informed decision-making. Maintain collaborative approach with partners, media and communities to address infodemics.
- Promote research, innovation and learning in all-hazards emergency risk management and health system resilience, including the use of knowledge to accelerate the scale-up of successful strategies to strengthen PHC-based health systems in all contexts, in combination with the required hospital reforms.

6. Increase domestic and global investment in health system foundations and all-hazards emergency risk management

The global cost of ensuring UHC and health security, as calculated by WHO, is extremely low compared with the cost of the pandemic and future threats such as climate change. Long-term resilience needs to be factored into national investment cases for health in order to build back better and further by drawing on integrated domestic and external funding and partnerships. The synergistic nature of health system strengthening and emergency preparedness capacities is such that investment in one will benefit the other. Addressing foundational health system gaps can improve health security, and investing in emergency preparedness reduces risks and their future negative and costly impact on health systems and services. Countries with FCV contexts including those under chronic economic downturn will need to have special consideration in harnessing global support and investment to build their health systems foundation and national stewardship.

To support the functionality of health systems and public health services, fundamental requirements must be in place, for example: functioning health information systems; adequate numbers of skilled human resources for health; reliable and readily available transportation, infrastructure; a scalable supply chain and essential medicines and equipment (e.g. PPE, diagnostics, vaccines); financing for adequate resourcing of the health system; and good governance mechanisms. In addition, complementary essential public goods and services, such as universal access to water, sanitation and clean and sustainable energy, are prerequisites for the provision of health services for the achievement of UHC and health security. The false dichotomy between communicable and non-communicable diseases and its relation to countries' development status needs to be debunked and there needs to be

integrated investments in communicable and non-communicable programmes in all countries.

Actionable recommendations

- Identify existing capacities to determine long-term health system strengthening and health emergency preparedness needs *(49)* and inform resource allocation to address foundational gaps in health systems and critical emergency management.
- Establish legislation and policy frameworks to increase and sustain fundamental health system and emergency preparedness requirements. This should include increasing the proportion of total government expenditure on health (called for in, for instance, the 2001 Abuja Declaration adopted by African States). This should build on advances made in strengthening capacity for emergency preparedness and response during COVID-19 to address future all-hazards emergencies.
- As a common good for health, prioritize public health and health security investment and financing through national and subnational budgets based on identified capacity gaps and lessons learned from COVID-19, integrating NAPHS health-sector-related components in national health policies, strategies and plans and in their budgets.
- Include investment in health systems, resilience and emergency preparedness on the agenda in regional cooperation body investment planning (e.g. Southern African Development Community, Economic Community of West African States, Association of Southeast Asian Nationals, Commonwealth, Belt and Road Initiative, etc.).
- Leverage investment in non-health-sector development strategies with a high impact on health, e.g. infrastructure, transport, water and electricity, trade, tourism.

7. Address pre-existing inequities and the disproportionate impact of COVID-19 on marginalized and vulnerable populations

Structural deficiencies in health, social and economic policies and sectors which impact the resilience of health systems and societies must be addressed, with a focus on leaving no one behind. All countries, regardless of income group (including those undergoing a chronic economic downturn), have populations with particular socioeconomic and health vulnerabilities, which must be addressed through health and social protection

measures. These should include removing financial barriers to high-quality health care (to ensure that people have access to coronavirus testing and treatment and other essential health services), enhancing income and job security, reaching out to those employed in the informal economy, protecting incomes and jobs and improving the delivery of social protection, employment and other interventions.

Countries with FCV settings may experience an exacerbated impact from epidemics and pandemics and increased vulnerabilities to other public health emergencies. Governance in those countries is complex, with areas of the country not under government control and huge challenges in health protection, access and security. Unless context-specific, integrated and effective support is in place, the situation of these countries may continue to deteriorate, putting at risk their national and global progress towards the SDGs, UHC and health security by 2030.

Actionable recommendations

- Guarantee access to safe and high-quality health care by mobilizing additional public funds to boost budgets as part of the emergency response. At the same time, safeguard and extend coverage of health protection and health-care provision mechanisms during and beyond the pandemic.
- Ensure engagement and participation of and consideration for vulnerable socioeconomic groups in national and subnational legislation, policies, planning and interventions for health system and community resilience. This may include displaced persons (e.g. refugees, internally displaced persons), migrants, elderly and minority groups in fragile, conflict and vulnerable conditions.
- Support financial protection for vulnerable populations, including those in the informal sector and economy, by pursuing social protection policies to ensure income security. This may include adapting the conditions governing entitlement to financial benefits and ensuring, where applicable, that cash transfers complement and strengthen social and health protection systems (e.g. in humanitarian contexts).
- Monitor inequities in health and health care to inform policies, planning and investment, including inequities related to financial, social and health barriers to health services in all countries and for all income groups.
- Explore common concerns, challenges and opportunities to strengthen the Humanitarian-Development-Peace nexus in settings with fragility, conflict and violence, foster strategic and operational connections between development and humanitarian programming, and create links with peace-building during the COVID-19 pandemic. Humanitarian coordination and response should explicitly complement and connect with national health sector and health security planning and interventions.

- Apply early recovery approaches and translate the humanitarian response and development agenda for COVID-19, in countries with FCV settings, into longer-term efforts for health system recovery and strengthening, with improved preparedness and response for future emergencies and invest in public health functions.

© WHO / PAHO

IV.
WHO's commitment to supporting Member States and communities in relaunching progress towards universal health coverage and health security

The COVID-19 pandemic has reaffirmed the importance of investment in health as a key political and economic choice. WHO, as the lead United Nations agency for health, in close collaboration with national and global partners and in line with World Health Assembly resolution WHA73.1 on COVID-19 *(50)* and Executive Board resolution EB146.R10 on strengthening preparedness for health emergencies: implementation of the International Health Regulations (2005) adopted by the World Health Assembly *(51)*, will support Member States in the implementation of relevant recommendations. This will involve bringing health systems, health emergencies and disease and life-course programmes together.

- **WHO will apply a multifaceted approach in the whole-of-government, whole-of-society engagement:** This will involve engaging the highest political levels including Heads of State and Ministers of key sectors beyond health, to advocate for a holistic approach to health emergency preparedness as key requirement of functional resilient national health systems with allied sectors, leveraging advances made during the pandemic response. WHO will also work with the ministries of health to promote the health agenda with other line ministries and partners. The aim will be to ensure sustainable action on rebuilding the health sector with a decided focus on health security and mitigating losses in progress towards SDGs.

- **WHO will make use of the lessons learned from COVID-19 in different contexts** and delineate and adapt good practices to inform country programmes for recovery, transformation and "building back better" and have stronger capacities to address future threats. This will complement the support provided for countries in identifying and applying lessons from their COVID-19 experiences.

- **WHO will strongly support multisectoral, government-led, socioeconomic recovery and transformation planning, implementation and monitoring processes:** this includes extending the whole-of-society approaches implemented during the COVID-19 response to recovery, risk reduction and preparedness against future threats. While this action is informed by the ongoing CPRP, the latter will be strengthened by more explicit approaches to early recovery and resilience in order to start "building back better" even during the ongoing response.

- **WHO will promote PHC-based health systems strengthening to achieve UHC and health security,** ensuring the continuum of care and the provision of high-quality essential health services that are safe for staff and patients during emergencies. This will require sufficient and appropriately trained human and other allied resources to strengthen PHC.

- **WHO will support countries in the development of national health policies, strategies and plans for health sector recovery and transformation**: this should include, where appropriate, upgrading existing infrastructure, increasing health workforce capacity and improving supply chain management and COVID-19 preparedness and response to address urgent bottlenecks and foundational gaps in EPHFs and foundations of health systems, adopting an all-hazards emergency risk management approach.

- **WHO will harness the health sector and economic recovery to strengthen and transform health systems that integrate UHC and health security goals**, with a focus on resilience in PHC services and EPHF, including all-hazards emergency risk management.

- **WHO will work with Member States and partners to strengthen the resilience of health systems and communities** when addressing disruption and safety in high-quality essential health services and ensuring ongoing preparedness and response to the COVID-19 epidemic. WHO will provide fast-tracked support for countries to integrate early-recovery approaches in country plans (e.g. CPRP), including introduction of new vaccines and treatments, and will build on these to lay the foundation for longer-term resilience. This will become a new strategic and operational reference for the "health first" approach in multisectoral socioeconomic response plans.

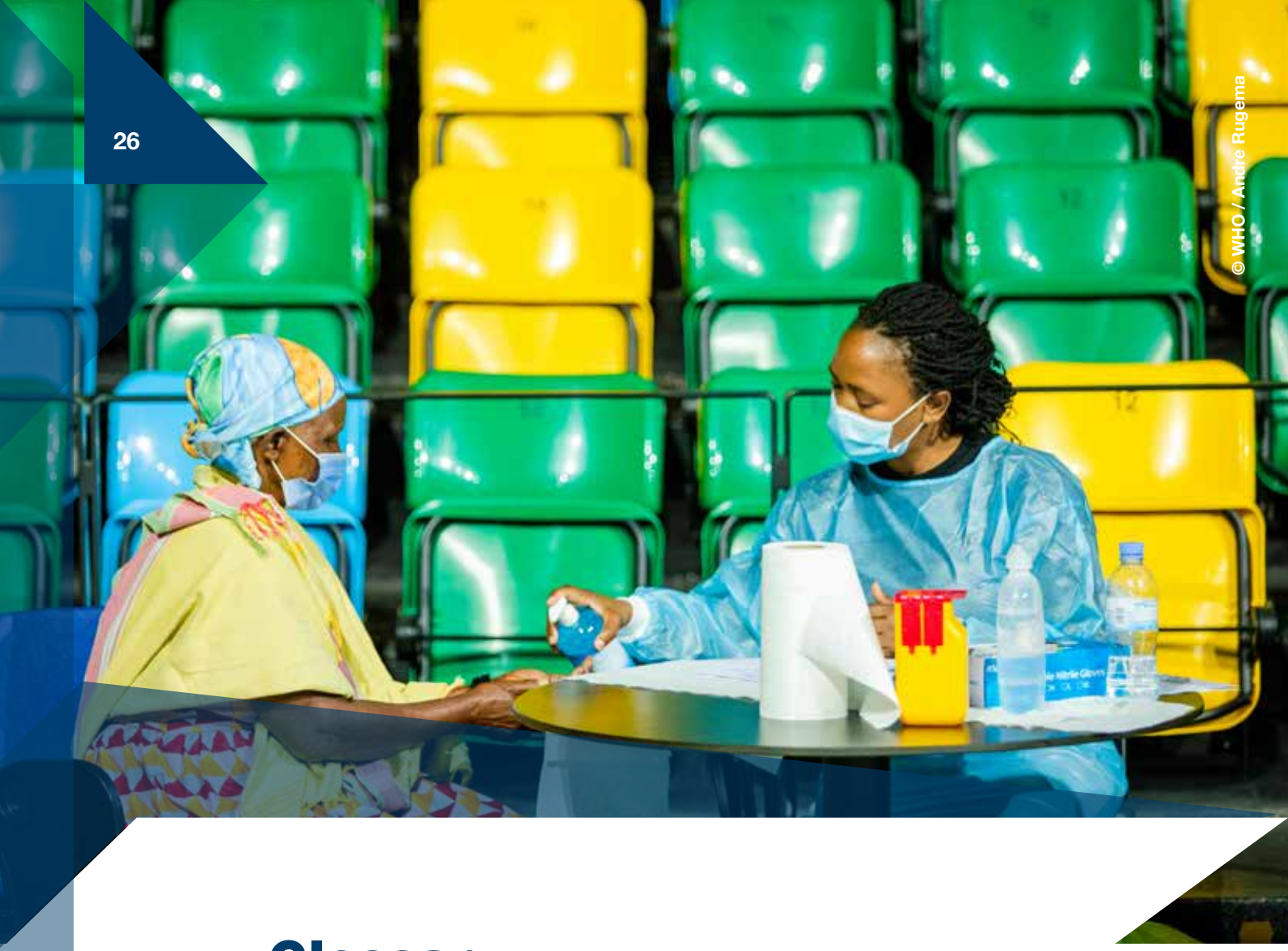
- **WHO will support countries in the reorientation of their health financing arrangements to anticipate and absorb economic shocks more effectively and combine greater flexibility in the use of public funds with strengthened, output-oriented accountability:** this will include policy dialogues and technical assistance to improve public financial management practices in the health sector.

- **WHO will intensify its support to address critical foundational health system issues in FCV settings and operationalization of the humanitarian, development and peace nexus and New Way of Working,** seeking complementarity between humanitarian and development stakeholders in line with humanitarian principles.

- **WHO will work with national authorities to strengthen the provision of EPHF/CGH, taking an all-hazards health emergency risk management approach** with a focus on emergency preparedness and response, including IHR (2005) and will support stewardship of national authorities including national public health institutes.

- Given the current limitations in traditional metrics for health security and UHC, **WHO will review and improve existing assessment, monitoring and reporting mechanisms for country capacities and progress in health security and UHC.**

- **WHO will strengthen existing in-country partner coordination mechanisms,** e.g. health development partner coordination and humanitarian coordination platforms, and leverage global partnerships to support countries, e.g. the UHC Partnership, the International Health Partnership for UHC 2030 (UHC 2030), the Global Health Cluster, the SDG Global Action Plan for health etc.



© WHO / Andre Rugema

Glossary

Common goods for health (CGH) are population-based functions or interventions that require collective financing, either from the government or donors based on the following conditions: 1. contribute to health and economic progress; 2. there is a clear economic rationale for interventions based on market failures, with focus on (i) public goods (non-rival, non-exclusionary) or (ii) large social externalities (*52*).

Disaster risk reduction refers to activities aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development (*53*).

Emergency preparedness refers to the knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters (*53*).

Essential public health functions (EPHF) are a list of minimum requirements for Member States to assure public health. These focus on health promotion, prevention, determinants and security. They include aspects such as surveillance and monitoring, public health workforce, governance, regulation and public health legislation, public health system planning and management, public health research, social mobilization and participation, preparation and response to health hazards and emergencies, and promotion of health and health equity (adapted from (*42*)).

Global health security refers to the activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries (*54*).

Health systems refers to the people, institutions and resources, arranged together in accordance with established policies, to improve the health of the population they serve, while responding to people's legitimate expectations and protecting them against the cost of ill health through a variety of activities whose primary intent is to improve health (*55*).

Infodemics: An infodemic is an overabundance of information, both online and offline. It includes deliberate attempts to disseminate wrong information to undermine the public health response and advance alternative agendas of groups or individuals. Mis- and disinformation can be harmful to people's physical and mental health; increase stigmatization; threaten precious health gains; and lead to poor observance of public health measures, thus reducing their effectiveness and endangering countries' ability to stop the pandemic

Recovery refers to the restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk (*53*).

Resilience refers to the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management (*53*).

Primary health care is a whole-of-society approach to health that aims to ensure the highest possible level of health and well-being and their equitable distribution by focusing on people's needs and preferences (as individuals, families and communities) as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people's everyday environment (*56*).

Universal health coverage means that all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship (*56*).

References

1. WHO Coronavirus (COVID-19) Dashboard, 23 June 2021. In: World Health Organization [website]. Geneva: World Health Organization; 2021 (https://covid19.who.int/)

2. World economic outlook update, June 2020. In: International Monetary Fund [website]. Washington (DC): International Monetary Fund; 2020 (https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020, accessed 7 November 2020).

3. A UN framework for the immediate socio-economic response to COVID-19. New York: United Nations; 2020 (https://unsdg.un.org/sites/default/files/2020-04/UN-framework-for-the-immediate-socio-economic-response-to-COVID-19.pdf, accessed 7 November 2020).

4. All Bets Are Off for Measuring Pandemic Preparedness. In: Think Global Health [website]. 2020. (https://www.thinkglobalhealth.org/article/all-bets-are-measuring-pandemic-preparedness, accessed 24 June 2021)

5. The true death toll of COVID-19 [website]. Geneva: WHO; 2021 (https://www.who.int/data/stories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality, accessed 24 June 2021).

6. Hogan AB, Jewell BL, Sherrard-Smith E, Vesga JF, Watson OJ, Whittaker C et al. Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modelling study. Lancet Glob Health. 2020; 8(9):E1132-E1141 (https://doi.org/10.1016/ S2214-109X(20)30288-6, accessed 7 November 2020).

7. Roberton T, Carter ED, Chou VB, Stegmuller AR, Jackson BD, Tam Y et al. 2020. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. Lancet Glob Health. 2020; 8: e901–e908 (https://doi.org/10.1016/S2214-109X(20)30229-1, accessed 7 November 2020).

8. Global Preparedness Monitoring Board. A world at risk: Annual report on global preparedness for health emergencies. In: World Health Organization [website]. Geneva: World Health Organization; 2019 (https://apps.who.int/gpmb/assets/annual_report/GPMB_annualreport_2019.pdf, accessed 7 November 2020)

9. World Health Organization. Pandemic influenza preparedness in WHO Member States: Report of a Member States survey. In: World Health Organization [website]. Geneva: World Health Organization; 2019 (https://www.who.int/influenza/preparedness/pandemic/member_state_survey/en/, accessed 7 November 2020).

10. Liang L-L, Tseng C-H, Ho HJ, Wu C-Y. Covid-19 mortality is negatively associated with test number and government effectiveness. Sci Rep. 2020; 10:12567 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7381657/pdf/41598_2020_Article_68862.pdf, accessed 7 November 2020).

11. Kohlenbach T. Five process lessons from New Zealand's response to the Covid-19 pandemic. In: Process Excellence Network [website]. 15 July 2020 (https://www.processexcellencenetwork.com/organizational-change/articles/a-team-of-five-million-five-process-lessons-from-new-zealands-response-to-the-covid-19-pandemic, accessed 7 November 2020).

12. Responding to COVID-19 - Learnings from Kerala. In: World Health Organization [website]. 2 July 2020 (https://www.who.int/india/news/feature-stories/detail/responding-to-covid-19---learnings-from-kerala, accessed 7 November 2020).

13. Kurian OC. How the Indian state of Kerala flattened the coronavirus curve. The Guardian. 21 April 2020 (Oommen C Kurian https://www.theguardian.com/commentisfree/2020/apr/21/kerala-indian-state-flattened-coronavirus-curve, accessed 7 November 2020).

14. Pollack T, Thwaites G, Rabaa M, Choisy M, van Doorn R, Luong DH et al. Emerging COVID-19 success story: Vietnam's commitment to containment. In: Our world in data [website]. 30 June 2020 (https://ourworldindata.org/covid-exemplar-vietnam, accessed 7 November 2020).

15. ASEAN health experts share government policies in tackling COVID-19 pandemic. In: Reliefweb [website]. 21 May 2020 (https://reliefweb.int/report/thailand/asean-health-experts-share-government-policies-tackling-covid-19-pandemic, accessed 7 November 2020).

16. Huston P, Campbell J, Russell G, Goodyear-Smith F, Phillips RL, v an Weel C, et al. COVID-19 and primary care in six countries. BJGP Open 2020; 4(4):bjgpopen20X101128. doi:https://doi.org/10.3399/bjgpopen20X101128.

17. Ghebreyesus TA. Exchange of views on the importance of health in development: European Parliament Committee on Development. 19 March 2018. Geneva: World Health Organization; 2020 (https://www.who.int/dg/speeches/2018/European-Parliament/en/, accessed 7 November 2020).

18. Ghebreyesus TA. All roads lead to universal health coverage. In: World Health Organization [website]. 17 July 2017 (https://www.who.int/news-room/commentaries/detail/all-roads-lead-to-universal-health-coverage, accessed 7 November 2020).

19. Policy brief: COVID-19 and universal health coverage. In: United Nations Sustainable Development Group [website]. October 2020 (https://unsdg.un.org/resources/policy-brief-covid-19-and-universal-health-coverage, accessed 7 November 2020).

20. Wenham C, Katz R, Birungi C, Boden L, Eccleston-Turner M, Gostin L et al. Global health security and universal health coverage: from a marriage of convenience to a strategic, effective partnership. BMJ Global Health. 2019; 4:e001145 (https://gh.bmj.com/content/4/1/e001145, accessed 7 November 2020).

21. Levine O, Gawande A, Lagomarsino G, Kelley E, Pearson LW, Pate MA. A safer world starts with strong primary healthcare. BMJ Opinion. 26 October 2020 (https://blogs.bmj.com/bmj/2020/10/26/a-safer-world-starts-with-strong-primary-healthcare/, accessed 7 November 2020).

22. Kluge H, Martín-Moreno JM, Emiroglu N, Rodier G, Kelley E, Vujnovic M et al. Strengthening global health security by embedding the International Health Regulations requirements into national health systems. BMJ Global Health. 2018; 3:e000656 (https://gh.bmj.com/content/3/Suppl_1/e000656, accessed 7 November 2020).

23. Living with COVID-19: Time to get our act together on health emergencies and UHC [discussion paper 27 May 2020]. Geneva: International Health Partnership for UHC 2030; 2020 (https://www.uhc2030.org/fileadmin/uploads/uhc2030/Documents/Key_Issues/Health_emergencies_and_UHC/UHC2030_discussion_paper_on_health_emergencies_and_UHC_-_May_2020.pdf, accessed 24 June 2021).

24. Stenberg K, Hanssen O, Tan-Torres Edejer T, Bertram M, Brindley C, Meshreky A et al. Financing transformative health systems towards achievement of the health Sustainable Development Goals: a model for projected resource needs in 67 low-income and middle-income countries. Lancet Global Health. 2017; 5(9): e875-e887 (https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(17)30263-2/fulltext, accessed 7 November 2020).

25. Majendie A, Parija Pratik. How to halt global warming for $300 billion. In: Bloomberg [website]. 23 October 2019 (https://www.bloomberg.com/news/articles/2019-10-23/how-to-halt-global-warming-for-300-billion, accessed 7 November 2020).

26. Klebnikov S. Stopping global warming will cost $50 trillion: Morgan Stanley report. In: Forbes [website]. 24 October 2019 (https://www.forbes.com/sites/sergeiklebnikov/2019/10/24/stopping-global-warming-will-cost-50-trillion-morgan-stanley-report/, accessed 7 November 2020).

27. Zwick S. As emissions rise, cost of fixing climate soars. Now $2-4 trillion per year. In: Ecosystem Marketplace [website]. 26 November 2019 (https://www.ecosystemmarketplace.com/articles/thanks-to-past-inertia-it-will-now-cost-between-1-6-and-3-8-trillion-per-year-to-fix-the-climate-mess/, accessed 7 November 2020).

28. International Working Group on Financing Preparedness. From panic and neglect to investing in health security: financing pandemic preparedness at a national level. Washington (DC): World Bank; 2017 (http://documents1.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-FINAL-IWG-Report-3-5-18.pdf, accessed 7 November 2020).

29. Peters DH, Hanssen O, Gutierrez J, Abrahams J, Nyenswah T. Financing common goods for health: core government functions in health emergency and disaster risk management. Health Syst Reform. 2019; 5(4);307–21 (https://www.tandfonline.com/doi/full/10.1080/23288604.2019.1660104, accessed 7 November 2020).

30. Strategy and planning. In: World Health Organization [website]. Geneva: World Health Organization; 2020 (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/strategies-and-plans, accessed 7 November 2020).

31. A UN framework for the immediate socio-economic response to COVID-19. New York: United Nations; 2020 (https://unsdg.un.org/sites/default/files/2020-04/UN-framework-for-the-immediate-socio-economic-response-to-COVID-19.pdf, accessed 7 November 2020).

32. WHO Manifesto for a healthy recovery from COVID-19. Geneva: World Health Organization; 2020 (https://www.who.int/docs/default-source/climate-change/who-manifesto-for-a-healthy-and-green-post-covid-recovery.pdf?sfvrsn=f32ecfa7_8, accessed 7 November 2020). Licence:CC BY-NC-SA 3.0 IGO.

33. Operational Framework for Primary Health Care. Geneva: World Health Organization & United Nations Children's Fund (UNICEF); 2020. (https://www.who.int/publications-detail-redirect/9789240017832, accessed 24 June 2021).

34. Thirteenth General Programme of Work 2019-2023. Geneva: World Health Organization; 2021 (https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019---2023, accessed 24 June 2021).

35. Huston P, Campbell J, Russell G, Goodyear-Smith F, Phillips RL, Weel Cv, Hogg W. COVID-19 and primary care in six countries. BJGP Open 2020; 4 (4): bjgpopen20X101128. DOI: 10.3399/bjgpopen20X101128

36. Nacoti M, Ciocca A, Giupponi A, et al. At the Epicenter of the Covid-19 Pandemic and Humanitarian Crises in Italy: Changing Perspectives on Preparation and Mitigation. NEJM Catalyst 2020 (https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0080, accessed 24 June 2021).

37. Laloux P. Comment fonctionnera l'application belge de traçage corona? Le Soir. 23 August 2020. (https://plus.lesoir.be/314771/article/2020-07-23/comment-fonctionnera-lapplication-belge-de-tracage-corona, accessed 24 June 2021).

38. The Global Economic Outlook During the COVID-19 Pandemic: A Changed World. Washington, D.C.: World Bank; 2020 (https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world, accessed 24 June 2021).

39. International Labour Organization. ILO Monitor: COVID-19 and the world of work. Third edition. Updated estimates and analysis. 29 April 2020. Geneva: International Labour Organization; 2020. (https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_743146.pdf, accessed 24 June 2021).

40. Contractor S, Kakar IS. Covid-19 and unregulated private hospitals: Lessons for Private Sector Engagement. International Health Policies. 18 June 2020. (https://www.internationalhealthpolicies.org/featured-article/covid-19-and-unregulated-private-hospitals-lessons-for-private-sector-engagement/, accessed 24 June 2021).

41. World Health Organization. Guidance for conducting a country COVID-19 intra-action review (IAR). Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-Country_IAR-2020.1, accessed 24 June 2021).

42. World Health Organization. Essential public health functions, health systems and health security. Developing conceptual clarity and a WHO roadmap for action. Geneva: World Health Organization; 2018 (https://www.who.int/publications/i/item/9789241514088, accessed 24 June 2021).

43. Declaration on Primary Health Care, Astana, 2018. In: World Health Organization [website]. (https://www.who.int/primary-health/conference-phc/declaration, accessed 24 June 2021).

44. Bitton A, Fifield J, Ratcliffe H, et al. Primary healthcare system performance in low-income and middle-income countries: a scoping review of the evidence from 2010 to 2017. BMJ Global Health 2019;4:e001551. (https://gh.bmj.com/content/4/Suppl_8/e001551, accessed 24 June 2021).

45. Boyce MR, Katz R. Community Health Workers and Pandemic Preparedness: Current and Prospective Roles. Frontiers in public health 2019;7:62. https://doi.org/10.3389/fpubh.2019.00062

46. Bhaumik S, Moola S, Tyagi J, et al. Community health workers for pandemic response: a rapid evidence synthesis. BMJ Global Health 2020;5:e002769. (https://gh.bmj.com/content/5/6/e002769, accessed 24 June 2021).

47. Rasanathan K, Evans TG. Primary health care, the Declaration of Astana and COVID-19. Bull World Health Organ. 2020 Nov 1;98(11):801-808. doi: 10.2471/BLT.20.252932.

48. World Health Organization. Health Emergency and Disaster Risk Management Framework. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO. (https://www.who.int/hac/techguidance/preparedness/health-emergency-and-disaster-risk-management-framework-eng.pdf?ua=1, accessed 24 June 2021).

49. World Health Organization. Investing in and building longer-term health emergency preparedness during the COVID-19 pandemic. Interim guidance for WHO Member States. Geneva: World Health Organization; 2020. (https://www.who.int/publications/i/item/investing-in-and-building-longer-term-health-emergency-preparedness-during-the-covid-19-pandemic, accessed 24 June 2021).

50. Resolution WHA73.1. COVID-19 response. In: Seventy-Third World Health Assembly, Geneva, 19 May 2020. Geneva: World Health Organization; 2020 (https://apps.who.int/gb/ebwha/pdf_files/WHA73/A73_R1-en.pdf, accessed 20 August 2021).

51. Resolution EB146.R10. Strengthening Preparedness for Health Emergencies: Implementation of the International Health Regulations (IHR, 2005). In: Executive Board, 146th Session, Geneva, 8 February 2020. Geneva: World Health Organization; 2020 (https://apps.who.int/gb/ebwha/pdf_files/EB146/B146_R10-en.pdf, accessed 20 August 2021).

52. Common goods for health. In: World Health Organization [website]. Geneva: World Health Organization; 2020 (https://www.who.int/health-topics/common-goods-for-health#tab=tab_3, accessed 7 November 2020).

53. United Nations General Assembly. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (document A/71/644). Note by the Secretary-General. New York: United Nations; 2016 (https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf, accessed 16 June 2021).

54. World Health Organization. The world health report 2007: a safer future: global public health security in the 21st century. Geneva: World Health Organization; 2007 (https://apps.who.int/iris/handle/10665/43713, accessed 20 July 2021).

55. World Health Organization. Health Systems Strengthening: Glossary. In: World Health Organization [website]. Geneva: World Health Organization; 2011 (https://www.who.int/healthsystems/Glossary_January2011.pdf, accessed 20 July 2021).

56. World Health Organization & United Nations Children's Fund. A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. Geneva: World Health Organization; 2018 (https://apps.who.int/iris/handle/10665/328065, accessed 20 July 2021).

WORLD HEALTH ORGANIZATION
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

https://www.who.int/