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A new understanding of global health security: three interlocking functions

As the world continues to fail the COVID-19 pandemic stress test, an increasing number of important efforts are underway to strengthen global health security (GHS). For example, the **Access to COVID-19 Tools (ACT) Accelerator** and the **COVAX Facility** have been launched by the **World Health Organization (WHO)** and its partners in April 2020. In 2021 alone, a Global Health Threats Council was proposed by the **Independent Panel on Pandemic Preparedness and Response (IPPPR)** in June, the G20 High-Level Independent Panel (HLIP) called for a public funding increase of USD 75 billion over the next five years to prepare for and respond to pandemics, and the World Health Assembly in a special session in November has agreed to proceed with the drafting of a new “pandemic treaty”.

It is hoped that these new international institutions and platforms will support better pandemic governance and financing at the global level. Although a global focus is crucial for the support of common goods, equity, standards and capacity-building, there is an equal need to focus on national efforts. Global leaders must resist two great temptations: the desire to build new institutions (instead of strengthening existing ones like the WHO), and the tendency to securitize health instead of implementing strong public health measures, surge capacity to accommodate heightened pandemic requirements while ensuring access to routine health care, and enabling healthy populations.

We believe that the understanding of global health security should be broad, to avoid unintended consequences of over-globalizing, over-engineering and over-securitizing health. An over-



globalized response could draw political attention and funding away from strengthening national-level core capacities required for prevention detection and response, which remains crucial in a world of nation-states. Over-engineering new institutions would cost time, political energy and money, while potentially encouraging countries to abandon fundamental existing institutions like the WHO and the **International Health Regulations (IHR)**. Finally, over-securitizing health will mean less focus on the social determinants of health and resilient healthcare systems.



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We propose a new understanding of GHS based on three interlocking functions at the national level. This synergistic approach to universal health coverage, health security, and health promotion was also recently discussed by a Lancet Commission, to be part of an upcoming publication:

1. Resilient healthcare systems with built-in surge capacity (including for primary healthcare);
2. Resilient public health core capacities that meet IHR standards;
3. Proactive investments toward supportive environments, wellbeing and healthy populations.

In this article, we explore the structural benefits of the three interlocking functions, propose ways to build them into our existing health architecture, and focus on the two essential requirements of global accountability and sustainable support for low-and-middle-income countries (LMICs).



Three structural benefits from the three interlocking functions

We discern three structural benefits from implementing the three interlocking functions at the national level. Firstly, these three interlocking functions each have strong conceptual frameworks and large bodies of evidence to support their positive impact on GHS. Health agencies at the national, regional and international levels are also familiar with them after decades of real-world implementation, and are able to achieve positive effects on health security and health outcomes through country- and community-level actions. There are also strong international commitments to the three interlocking functions, like the **United Nations High-Level Meeting on Universal Health Coverage** and the **WHO's Global Action Plan for Healthy Lives and Well-Being for All**.

Secondly, these three interlocking functions mirror the WHO's triple billion strategy in the **WHO 2019-2023 Global Programme of Work** and **Sustainable Development Goal (SDG) 3 of Good Health and Well-being**. A close alignment with well-established and highly-visible frameworks will ensure that political attention and funding remain focused on the three functions.

Finally, the three interlocking functions provide a pragmatic “middle path” for countries. Currently, countries appear to perceive that public health, UHC and enabling healthy populations are mutually exclusive strategies requiring a binary choice. Limited resources and/or bilateral donor funding also push governments towards “false choices”. Such a dichotomy is further enhanced by the global nature of GHS (with accountability towards the international community and IHR) and the domestic nature of UHC and health promotion (with accountability towards local voters, taxpayers and citizens).

To find a practical balance between their domestic and international priorities, countries can adopt the strategy of the three interlocking functions. This can be assisted by political and health leaders with the courage, vision and ambition to rethink some of the many vertical (albeit well-meaning) global implementation and funding streams to ensure that they serve to strengthen these three functions and not bypass or weaken them.

If implemented correctly, these three interlocking functions would be very useful even individually. It is also likely that they would be mutually synergistic, with progress in one function accelerating or enhancing progress in another function. Taken together, they represent a better balance towards GHS and reduce the risk of over-globalizing, over-engineering or over-securitizing health.

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Three realistic implementation strategies

We propose three specific implementation strategies for the three interlocking functions. Firstly, we must implement the minimum standards already set for each of the functions and bring them together to constitute a collective whole. Standards have been set by frameworks such as:

1. Public health and health security frameworks, like the IHR core capacities, the Pandemic Influenza Preparedness Framework, and the Global Health Security Agenda;
2. Health coverage frameworks, like the WHO's UHC Service Coverage Index and World Health Statistics, or the ACT-Accelerator's Facilitation Council; and
3. "Supra-health" frameworks, like the progress reports towards the 13 targets and 28 indicators for SDG3, as measured by the United Nations Department of Economic & Social Affairs (UN DESA).

These frameworks should be considered intermediate steps towards a more robust "steady state of minimum health standards". COVID-19 provides a unique technical and political opportunity to strengthen these frameworks by seeing them as "a whole" together and working towards modifying indicators and standardizing their statistical methodologies, increasing transparency through mandatory reporting, and integrating frameworks to create synergies and reduce duplication.

Secondly, we call for a much broader coalition of health and non-health stakeholders to truly embed the three interlocking functions and to increase their overall resilience. COVID-19 has shown that healthcare services alone cannot protect population health, no matter how resilient healthcare systems, primary healthcare, or public health systems are. Healthcare services can better protect populations if the populations are healthier in the first instance. Therefore, Health in All Policies must now be extrapolated to GHS and vice versa. In practical terms, this means that GHS leaders must actively look beyond their own field, and build strategic and operational bridges to counterparts in international development (trade, finance and economics or ratings agencies), law (human rights or international law) and other sectors, especially the environment.

This will require a new approach of measuring human development that elevates health. One example is to increase the sophistication of health indicators in the UN Development Programme's **Human Development Index** (which currently uses the blunt instrument of "life expectancy at birth" as the sole health metric). The OECD is also measuring country progress based on a **Better Life Index** that accounts for well-being and quality of life.

Another example is to make health inputs, outputs or outcomes a pre-condition for aid or loans (by Bretton Woods lenders or multilaterals), or even use them as an additional metric for ratings agencies (like Moody's or Fitch Ratings) or the Environmental, Social and Governance (ESG criteria) for institutional investors (like Blackrock with its US\$9 trillion of assets under management). When combined, these "financial pressure points" would further incentivize, institutionalize and integrate the three interlocking functions, and increase their overall resilience.

Thirdly, we call for a high-level political commitment at the United Nations General Assembly (UNGA) for a holistic approach to GHS via the three interlocking functions. This political commitment can take many forms. It can be as straightforward as a UNGA resolution instructing the WHO Director-General to incorporate the three interlocking functions into existing standards. Or it can be as complex as a multi-year process towards a pandemic treaty (under UN auspices, like the Treaty on Non-Proliferation of Nuclear Weapons) or a Framework Convention (following Article 19 of the WHO Constitution, like the Framework Convention on Tobacco Control). The chosen instrument depends on political will and feasibility, but must be ambitious, enforceable, hyper-realistic, and include the five veto-wielding countries in the Security Council.

Solving the two essentials: accountability & funding

All efforts to strengthen GHS must address the two essentials: countries must be held accountable for minimum health standards, and LMICs must receive sustainable funding and support.

1. We must hold countries accountable

Firstly, all parties agree that countries must be held accountable to their minimum obligations for health, especially to the IHR core capacities. We propose strengthening the IHR's Joint External Evaluation (JEE) process in three ways: by integrating best practices from other relevant enforcement frameworks; to merge JEE with other enforcement frameworks where possible or necessary; and to introduce transparency.

The JEE can draw lessons from, and be consolidated with, other global enforcement frameworks, such as country obligations for human rights, labour rights, international trade or finance, or climate change. Generally, global enforcement frameworks take place in three ways:

1. Periodic self-review, like the Human Rights Council Universal Periodic Review process or the Tripartite Antimicrobial Resistance country self-assessment survey (TrACSS);
2. Periodic peer reviews, like the World Trade Organization Trade Policy Review Mechanism or the Financial Action Task Force Mutual Evaluations;
3. Periodic external reviews, like the Paris Agreement for Nationally-Determined Contributions to reducing carbon or the International Labour Organization's Committee of Experts.

There is unlikely to be a "single best accountability mechanism" to hold countries responsible for their three interlocking health functions. The most important factor is government engagement, but this is not measured by various international comparisons that create country indices and rankings of pandemic preparedness.

Therefore, we call for a mixed approach to national accountability that integrates periodic self, peer and external reviews. We also call for a "strategic enforcement convergence" between the different accountability approaches and frameworks from other sectors. As they govern inter-linked challenges like global health security and human rights, their integration will strengthen accountability through synergy, best practices, reduction in gaps, as a redundancy if the primary mechanism fails, and as a "layered risk reduction" approach.

Transparency is crucial in any accountability mechanism, and must be embedded at all layers and in all processes. We also call for new discussions for new legal provisions for on-site inspections for the three interlocking functions, without country consent. Any new legal provisions can be based on the precedent for unconsented weapons inspections by the Organization for the Prohibition of Chemical Weapons or unconsented human rights inspections by the Subcommittee on Prevention of Torture. While we believe that such an ability is necessary, we also believe that its use should be limited to extreme worst-case scenarios and following a rigid protocol.

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2. We must provide sustainable funding support to LMICs

The second essential is sustainable financing and support for LMICs to develop their own capabilities in the three interlocking functions. In this respect, we support the principles of the G20 High-Level Independent Panel on **Financing the Global Commons for Pandemic Preparedness and Response**, but we propose to add several more principles:

1. Donor funds and technical assistance will always play a role, but structures (aid, financial, political and geopolitical) must incentivize a clearly understood national responsibility;
2. Global health structures must be reformed to be more inclusive and “decolonized” (in the sense of avoiding top-down approaches to development based on donor priorities), which will increase equity and the motivation for LMICs to actively participate; and
3. All stakeholders must build and advance the case that the three interlocking functions are in the best interests of all countries (not just LMICs), and that they are also in the self-interest of political leaders seeking public office or re-elections.

Following these principles, we call for greater financial investment by the global community to create stronger health systems, public health core capacities and healthier populations in both high income countries (HICs) and LMICs but this must be supported by country based political will and investments. International development banks, multilateral agencies and other financial institutions should make health a higher priority in their aid, loans or investment criteria for LMICs.

▼ **Countries must view health as an investment, not as a fixed cost, and make the necessary political choices for better health** ▼

We also call for the decentralizing of capacity to implement away from the global-level headquarters of all international health agencies, in order to strengthen capacity at regional or national offices. This includes creating positions for senior staff in regional or national offices, increasing decision-making privileges for regional or national offices, and conducting demand-led research “closer to the ground” where it has a higher chance of being utilized. Regional and country offices should then have a clear mandate to support national institutions, and resist the temptation to attempt to do too much themselves. With appropriate administrative, political and capacity decentralization, the entire global health “food chain” would be strengthened.

Finally, we also call for all countries (whether LMICs or HICs) to provide adequate political, financial and human capital to support the three interlocking functions at the national level. In practical terms, this means mobilizing additional sources of healthcare funds, the necessary social contract discussions with citizens and taxpayers needed to raise these additional funds, and the efficient and accountable use of these funds. Countries must view health as an investment, not as a fixed cost, and make the necessary political choices for better health. For LMICs, this also requires a long-term strategy to be more self-reliant for their health systems and three interlocking functions.

Health must be integrated

An overly narrow focus on global health security following the COVID-19 pandemic runs the risk of an over-globalized, over-engineered or over-secritized approach to ensure human health. This runs counter to the approach adopted in the Sustainable Development Goals. The three interlocking functions of robust health systems with surge capacity, strong public health core capacities, and healthy populations are holistic, pragmatic, and feasible to strengthen global health security. There are practical and politically realistic ways to implement the three functions, while holding countries accountable and supporting LMICs in sustainable and dignified ways.



Author biographies

Professor David Heymann is professor of infectious disease epidemiology, London School of Hygiene & Tropical Medicine. He is also an elected fellow of the Institute of Medicine of the National Academies (US) and the Academy of Medical Sciences (UK). Previously he was the World Health Organization's assistant director-general for health security and environment, and representative of the director-general for polio eradication. From 1998 to 2003 he was executive director of the WHO Communicable Diseases Cluster, during which he headed the global response to SARS, and prior to that was director for the WHO programme on emerging and other communicable diseases.

Professor Ilona Kickbusch is the Founder of the Global Health Centre at the Graduate Institute in Geneva. Her areas of expertise include the political determinants of health, health in all policies and global health. She advises countries on their global health strategies, trains health specialists, and is involved in German G7 and G20 health activities. She was a key instigator of the Ottawa Charter for Health Promotion and WHO's Healthy Cities Network and has remained a leader in this field, most recently advising on WHO's activities related to Health in the SDGs. She was the Director of the Global Health Division at Yale University School of Public Health and responsible for the first major Fulbright Programme on global health.

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Doctor Swee Kheng Khor is a physician specialising in health systems & policies and global health, focusing on south-east Asia. Currently, he holds visiting fellowships at the United Nations University International Institute for Global Health (UNU-IIGH) and the Institute for Strategic and International Studies (ISIS) Malaysia, while also consulting for several organisations.

Reflection: A new understanding of global health security: three interlocking functions

Author: Mely Caballero-Anthony

COVID-19 has indeed been a crisis like no other, but this is an understatement given the severity of its impact on humanity globally. As most parts of the world continue to grapple with the huge task of ending the pandemic, the message could not be clearer: health security is fundamental to international peace and security. Addressing existential challenges brought on by COVID-19 and other infectious diseases requires effective governance of global health security at multiple levels from the local to the global arena.

The ongoing COVID-19 pandemic revealed serious gaps in GHS governance. Many of the policy responses by governments were found wanting in many respects. These included, the lack of pandemic preparedness and response, lack of coordination among government agencies, lack of enforcement of public health measures, – not to mention – the growing pandemic fatigue. The pandemic has also exposed an often overlooked and under-appreciated weakness of national public health systems. The lack of attention given to addressing public health challenges at the national level has skewed international efforts toward ensuring global health security. As pointed out by this report, the understanding of, and responses to, GHS has been over-globalised, over-engineered and over-securitised. The report notes the far reaching consequences of such narrow responses on global health: over-globalising draws political attention and funding away from strengthening national-level core capacities, over-engineering new institutions not only cost time, energy and money but could result in countries abandoning existing institutions like the WHO and the IHR, and over-securitising health trumps efforts at addressing the social determinants of health, including building resilient health systems.

The authors have persuasively argued for a ‘correction’ of the current pre-occupation with pandemic preparedness, which while continuing to be important, tends to draw less attention to the basics of global health security. The report therefore proposes a new understanding of GHS based on what Heymann and Kickbusch refer to as ‘three interlocking functions’ at the national level. These are: “(1) resilient healthcare systems with built-in surge capacity including primary health care; (2) resilient public health core capacities that meet IHR standards, and (3) proactive investments toward supportive environments, wellbeing and healthy populations”. The report then goes on to identify three corresponding benefits and implementation strategies for each of the functions that have been laid out.

The report is a timely initiative against the slew of multi-faceted challenges brought on by the COVID-19 pandemic. It has set out a ‘new’ agenda for global health security while reminding us not to take our eyes off the basic foundations of global health. And while it boldly calls for holding countries accountable to meeting their minimum obligations to health, particularly in achieving the IHR core capacities, it also underscores the need for providing funding resources to help and incentivize developing countries to build national capacities and strengthen public health systems. The authors further argue that good health makes good politics, in that it is in everyone’s interest to advance a comprehensive GHS strategy particularly in a post-COVID world.

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