Lancet Commission on synergies between universal health coverage, health security, and health promotion

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Executive summary

Since 2018, this *Lancet* Commission has sought to understand how to maximise synergies between the global health agendas of universal health coverage, health security, and health promotion, and what drives dis-synergies. By synergies the Commission is referring to an intervention, institutional capacity, or policy, that positively and substantially contributes to the achievement of two or more of these agendas in the areas where they intersect. We gathered data through desk reviews; case studies at the subnational, national, and global levels; consultation with two subregional bodies; and periodic Commissioner meetings both face to face and online to review, analyse, and synthesise data. Several key findings and implications for action arise from the analysis and the gathered data, particularly the in-depth country case studies, which provided several examples of these issues in action.

Fragmentation and dis-synergies between agendas is near universal and undesirable

Societies can and should pursue the agendas of universal health coverage, health security, and health promotion synergistically. We note that maximising synergies is important for both infectious and non-infectious diseases, and both endemic and epidemic diseases. However, we observed that, in countries at all income levels, counterproductive competition and fragmented investment are too often present in the implementation of these agendas, undermining the ability of health systems to achieve any of them—what we refer to as dis-synergies. For example, as highlighted by our in-depth country case studies, in some contexts, investments in health security detract from attempts to achieve universal health coverage, or efforts towards universal health coverage miss opportunities to promote healthy lives (ie, health promotion). Such dis-synergies weaken health systems, making them less able to cope with day-to-day and emergency demands, and render people more vulnerable to serious disease, as we saw with the COVID-19 pandemic.

COVID-19 has been our warning

The COVID-19 pandemic has shown that it makes good sense for all countries, regardless of their income level, to develop comprehensive health systems with synergies between health security, health promotion, and universal health coverage. We explored this in our COVID-19 case study and found that universal health coverage and healthier populations have helped some countries withstand the pandemic by accommodating the surge of patients from COVID-19, minimising stress on health-care facilities; and by minimising the burden and strain of serious COVID-19 disease on health systems because of fewer comorbidities.

Drivers of dis-synergies are diverse and multidimensional, including ill-considered national self interests and coloniality

Drivers of dis-synergies in subnational, national, and global health are diverse. Drivers include inappropriate laws and policies; imbalanced investments in specific areas of health systems; disregard for context; siloed programmes; inadequate capacities; politically driven interventions not based on evidence; ill-considered national self interests; and coloniality. Coloniality involves frameworks of thinking and doing that lead to misuse of power over others in decision making and implementation, with an assumption of inherent superiority without critical questioning of validity. Centralised decision making, exploitation of power disparities, disregard of context, and failure to critically question the validity of decisions are all manifestations of these drivers. An example of coloniality potentially exacerbating dis-synergies in health systems is when nationally identified health priorities are unsupported by some powerful global-health actors if they are not consistent with their own priorities and concerns, as sometimes occurred in the early stages of Ghana's national health insurances reforms. The national health insurances reforms, which were an attempt to introduce universal health coverage into interventions and synergise with other health sector interventions, despite resource constraints, had to sometimes contend with opposition from some powerful global funders who saw the reform as inappropriate for a highly indebted poor country. Donor funding for health security investments in resource-constrained settings have been justified as serving the self interests of the donor country.

We acknowledge that national self interest will take priority for governments of all countries as they prioritise and allocate funding and make decisions for national or international health objectives, regardless of country income level. However, supporting health security in a manner that is synergistic with universal health coverage and health promotion can help a country better control

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infectious disease. Thus, we argue that global solidarity in health can be consistent with enlightened self interest.

Changes in mindsets, decision making, and accountability are required to advance towards the comprehensive health systems we need to achieve universal health coverage, health security, and health promotion

We recognise that pulling together fragmented approaches that have evolved into entrenched systems requires long-term processes of change, which could sometimes take decades. We argue that constructing coherent comprehensive health systems is nevertheless necessary and will require three changes.

First is a change in mindset. We urgently need to reframe health in a comprehensive, holistic manner, and to develop shared values and principles to achieve this vision. We need to recognise that all health systems operate with constrained resources, and realising synergies at the intersections between universal health coverage, health security, and health promotion is not only desirable but necessary, rather than promoting any one goal at the cost of the others.

Second is a change in decision-making. A decolonised approach would avoid top-down decision making that exploits power disparities within and between countries. We need to shift away from decisions that privilege global or donor priorities over those of implementing countries. We also need to end the wholesale uncritical transfer of interventions, policies, and programmes from the global to the national, or from one country to another. Instead, decisions should be based on evidence and understanding of how and why particular interventions work in context, valorising the knowledge required to make interventions work. Our country case studies show the importance, feasibility, and effect of national health leaders asserting their health priorities. Global health agencies should offer enough flexibility for countries to adapt investments, policies, and programmes to national priorities and contexts.

Third is a change in accountability. In our view, national governments retain primary responsibility for the health of their populations, and it is they who should be accountable for maximising synergies in their health systems. Holding governments accountable requires improved methods to measure and track synergies and dis-synergies, resilience, and performance of health systems over time. This change lies beyond the scope of this Commission but could be taken forward as a next step. That said, we recognise that, particularly in countries where development assistance for health has a substantial role, providers of development assistance for health (both funding and technical advice and support) hold considerable power. These powerful countries therefore also bear responsibility and should be accountable for their contributions to dis-synergies or synergies in health systems. There is also ample space to improve synergies between global actors at the international level. Therefore, a monitoring and accountability framework should encompass both national and global actors and could make a small contribution to addressing power disparities between and within them.

Introduction

Starting in 2018, the *Lancet* Commission on Synergies set out to better understand the tensions created globally between the three concepts of universal health coverage, health security, and health promotion; and to recommend ways to overcome these tensions.[1] The Commission gathered data through desk reviews; case studies at the country, subregional, and global level; and consultation with two subregional bodies with periodic Commissioner meetings face to face and online to review, analyse, and synthesise the emerging data.

The global COVID-19 pandemic emerged in late 2019, a little over halfway through the work of this Commission, and rapidly evolved. Millions of people have died globally from the pandemic, and a new virus has been added to an already long list of communicable diseases that plague humanity. As the Commission observed the pandemic's evolution, it appeared that COVID-19 was an unfortunate real-life case study of the sometimes devasting effects of failed synergies between universal health coverage, health security, and health promotion in countries of all income levels. However, the COVID-19 pandemic could still have some use if it could act as a global warning.

Specifically, COVID-19 showed that it is not possible for a country to effectively "detect, assess, notify and report" a health security threat and "to respond promptly and effectively"—as prescribed by articles 5 and 13 of the International Health Regulations[2]—without ensuring that all people can access good quality basic health services, a concept central to universal health coverage; and can better resist severe illness and death from infections, a concept central to health promotion. Mortality, at the time of finalising this report, has been disproportionate among those with comorbidities, many of which are the result of unhealthy living, working, and social conditions.[3,4] The inability of many people to live healthy lives that could have prevented and protected them from severe outcomes of COVID-19, even in the wealthiest countries of the world, contributed to the inability of many health systems to provide an effective response. The response in many countries was not as effective as it could have been. The vision for health security should have included investments in universal health coverage that ensured access to robust and resilient health care: in primary health-care approaches linked to community systems and in health-promotion efforts to ensure populations with fewer comorbidities caused by unhealthy conditions and practices.

The COVID-19 pandemic showed that it is difficult, if not impossible, to respond to major health security threats from infectious diseases if there are gaps in synergising health promotion agendas with health

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security agendas. Synergising these agendas ensures that populations can reduce infection and avoid severe outcomes from infection because the living, working, and social conditions that expose people to risk and increase comorbidities related to unhealthy conditions and practices are being addressed. Similarly, if prompt and effective outbreak response, as described by the International Health Regulations, is an insurmountable challenge for basic public health services and interventions, and if health systems are not investing in universal health coverage and sufficiently robust and resilient systems to manage surges of patients affected by pandemic disease, the health security agenda will fail. Even public-health and curative-health services with high aggregate financial and human resources have sometimes been overwhelmed by the COVID-19 pandemic. Routine health services have been cancelled and delayed, putting people who were not directly affected by the pandemic at risk.

Research questions and objectives

We urgently need a renewed understanding of the importance of developing synergies between major national and global agendas to protect the health of populations. The questions this Commission started with are relevant now more than ever. But understanding does not in itself guarantee that everyone will work more effectively together towards what Loewenson and colleagues[5] term comprehensive public health. Therefore, we must answer the question of why synergies in health are missed globally, nationally, and subnationally.

The *Lancet* Commission on Synergies therefore aimed to systematically examine the intersections between the three leading agendas in global health of universal health coverage, health security, and health promotion. The Commission also looked to identify key policies, institutional capacities, decision-support systems, and interventions that contribute across the three agendas and can make strength in one area amplify strength in the others. The Commission hopes that its findings will help the many and diverse stakeholders better align their efforts, cooperate more efficiently, and save and improve more lives.[1]

The Commission had five research questions. First: what intersections, potential synergies, and fragmentation occur between the three agendas of universal health coverage, health promotion and health security at the global, national, and subnational levels? Second, how and why are potential synergies realised or missed at intersections? Third, what systems, policies, and institutional capacities can promote beneficial agenda intersections and synergies? Fourth, what are the multilateral efforts to promote synergies at agenda intersections? Finally, how do the approaches of countries that provide development assistance for health and engage in global health foster synergies or fragmentation at intersections?

We chose the three health agendas of universal health coverage, health promotion, and health security to study for several reasons. First, these are agendas that all UN members states agreed with the endorsement of the UN Sustainable Development Goals (SDGs) in 2015. The tension and fragmentation between universal health coverage and health security was clearly addressed during the 2017 election campaign of the then Minister of Health of Ethiopia, Tedros Adhanom Ghebreyesus, an outspoken advocate of universal health coverage.[6] After he had won the election and took office as Director General, he grounded WHO's thirteenth general programme of work (WHO GPW13) in the three targets of universal health coverage, health security, and health promotion.[7] This foundation created, in our opinion, a window of opportunity to explore tensions and synergies between the targets.

The framing of key concepts in this Commission

Universal health coverage, health security, and health promotion

The Commission did a desk review to inform consensus building on the meaning ascribed to the terminologies of universal health coverage, health security, and health promotion. The intention was not for the Commission to be an authority on definitions but to ensure that the report is read without ambiguity in meaning. Universal health coverage, health security, and health promotion have all been defined multiple times.[8–11] We summarise the historical trend information in more detail in the appendix (pp 1–3) of this report.[12]

Nearly all prominent definitions of universal health coverage comprise three requirements: inclusivity (everyone or universality), ability to access needed services, and to do so without financial hardship when using needed services.[13–19] There are two major differences across prominent definitions of universal health coverage that are particularly relevant to the Commission. First is whether non-individual (ie, population health) interventions are part of universal health coverage; and second is whether only an essential subset of interventions are relevant. Although several definitions of universal health coverage emphasise individual-health services, clinical-health services, and financial protection as core, several prominent definitions also include population-based interventions to promote better health (eg, tobacco tax) or prevent disease (eg, vaccines).[14] Kutzin and Sparkes[20] argue that both individual-health and public-health services are important and fall under the scope of universal health coverage since the general public values both. Some argue that "several pressures can lead to the prioritization of the curative clinical services at the expense of population-level health interventions in pursuit of universal health coverage goals", and that although "the concept of universal health coverage certainly incorporates public health services there is a real possibility that public health interventions

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are under-prioritised in resource-constrained countries pursuing the universal health coverage goal".[21] The extent of health-care services to be included under universal health coverage is subject to ongoing processes and linked to political debate. Several publications suggest that the agenda's composition should vary between country contexts according to the availability of resources. The focus of SDG 3.8 is not just on access to health-care services. Almost all definitions use qualifiers or adjectives such as quality, essential, core, key, high-priority, or needed health-care services. These variations could be related to disagreements over when and where universal health coverage has been established, for example the difference between nominal and effective universal health coverage and even whether it is achievable at all.[22]

The Commission adopted the definition embedded in SDG 3.8 that integrates the elements of access to services, medicines, and vaccines; quality; and financial-risk protection for all. This definition entails a focus on individual health services (including individual promotive, preventive, and curative services). The definition also focuses on essential or priority services, which is reasonable given that no government can provide all potentially beneficial services to everyone without compromising other social objectives. Essential is understood to be quite broad and increase in scope proportionally to the availability of resources, so improves focus on the most important services, while not inviting complacency. For the purposes of this report, the Commission uses the WHO definition of universal health coverage (UHC) as meaning "that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation, and palliative care across the life course."[23]

The terms health security and global-health security, both exist in the literature without explicit consensus on the difference between the two; and are used near interchangeably in some publications. Definitions of both concepts have at their core protection from, or reduction of vulnerability to, some sort of public-health threat. Most, but not all definitions, categorise health threats, risks, or endangering events as acute, rapid, new, or similar. Definitions of global-health security typically specify threats, risks, or endangering events that do not respect international boundaries, but they do not strictly limit its use to transnational threats.[24–28] According to Rushton,[29] there are "two radically different formulations of health security: a statist/national security one, [...] focused primarily on stopping diseases entering or otherwise destabilizing states and societies, and a globalist/human security one, [...] open to the consideration of a much broader range of issues that threaten individual health and well-being". Labonté and Gagnon[30] argue that "human security focuses on the protection of 'the vital core of all human lives in ways that enhance human freedoms and human fulfilment'". Along these lines, Heymann and colleagues[31] argue for an expansion of the prevailing health security concept to also encompass individual health security (resulting from "personal access to safe and effective health services, products, and technologies"), and non-communicable diseases. The Global Health Security Agenda has an explicit focus on infectious disease threats, whereas many definitions are deliberately open to other kinds of threats, risks, or events also.

The World Health Report's 2007[24] definition of global health security seems to be the most often cited. McInnes[32] argues that the definition of health security is essentially contested and not amenable to a single set of agreed criteria. Conversely, Rushton[29] writes that "despite some dissenting voices, there is in fact a broad consensus over the core features of health security" and "much of the controversy around global health security is the result of a feeling in some quarters that this discourse relates primarily to a Western conception of risk, and [...] the prioritization of measures designed to contain disease within the developing world rather than [...] address the root causes of disease".[29] The International Health Regulations core capacities are frequently cited as being key to the agenda of global health security.[25]

Rather than account for all criticisms of the common definitions of health security, the Commission explored synergies that could mitigate some of the tensions from which these debates arise. We also avoided expansion of the concept to include elements that are core to the other agendas such as access to health care, interventions against non-communicable diseases, or health promotion-related initiatives targeting social determinants of health. The Commission felt it was important to focus on the core elements in almost all definitions; specifically, health risks that are rapidly spreading, might disregard international borders, and are of any aetiology. The Commission felt WHO's definition of global health security, "the activities required, both proactive and reactive, to minimize the danger and impact of acute public health events that endanger people's health across geographical regions and international boundaries",[33] was in keeping with the Commission's thinking and deliberations and adopted it as the working definition of health security and global health security.

In contrast to universal health coverage and health security, health promotion is mostly conceptualised as a process or set of activities and interventions, not as a goal or desired outcome. The term promoting healthier lives is also used and can be considered a more implicit statement of outcome in that health promotion is what we do; promoting healthier lives is what we want.[20] A wide set of interventions are a part of health promotion, including those ranging from targeting individuals to population-based interventions related to governance, urban planning, and many other arenas in both lower-middle-income countries (LMICs) and high-income

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countries (HICs). Some prominent health-promotion scholars, such as Sparks,[34] argue that health promotion should not be limited to certain disease-related agendas, such as non-communicable diseases or obesity, but "is an approach with practices, concepts and methods that can be used to address each of these important public health challenges". Other authors explicate a specific agenda for health promotion. For example, Coe and de Beyer[35] specify that the health-promotion agenda "cover[s] both infectious diseases and the emerging priorities related to [non-communicable diseases and injuries]" and list "major health promotion categories for the developing world", distinguishing between traditional agenda items (eg, immunisation, family planning, breastfeeding, undernutrition, water and sanitation, safe sexual behaviour, insecticidal treated bed nets, and gender based violence) and emerging agenda items (eg, tobacco, alcohol, overnutrition, physical activity, salt consumption, drug use, and injury). Health promotion has also been conceptualised as the culmination of initiatives to address the social determinants of health.[36] WHO's General Programme of Work 13 states that health promotion is a key component of universal health coverage. Simultaneously, the General Programme of Work 13 introduces agenda items that are core to health promotion under its Promoting Healthy Populations strategic priority.

The Commission agreed to use a definition of health promotion based on the Ottawa Charter as "policies and education that help people to increase control over their own health. It covers a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure."[37] Accordingly, action outside the health sector and intersectoral collaboration are important.

As set out by the Ottawa Charter, health promotion cannot occur without an enabling environment, and we think the terminology enabling healthy lives is a better description of the concept of health promotion. Enabling healthy lives captures the fact that preventable comorbidities are often driven by determinants at different levels, including social inequalities; inadequate information, awareness, and policies; legislation, and resource allocations that limit the ability of populations to make and implement choices for healthy lives. However, the terminology enabling health lives could be used for describing the overall goal for SDG 3 rather than for replacing the health promotion concept. Since the commission started out with the descriptor health promotion, we maintain its use in our report.

National self interest

Because states have different self interests, they often have divergent priorities when they engage in international cooperation, including for health.[38] If we accept that states are self interested, we can theorise that when many low-income countries (LICs) and LMICs that have not yet attained universal health coverage, health security, and health promotion participate in global cooperation, they often seek international support to help achieve or sustain these agendas. This support might be provided through mechanisms such as international regulations on tax, intellectual property, regulations on the hiring of foreign health workers, trade agreements, and technical and financial assistance.

Universal health coverage, health security, and health promotion are also a priority for people living in upper-middle-income countries (UMICs) and HICs. However, many, though not all these countries, have attained or are close to attaining a reasonable degree of universal health coverage.[39] UMICs and HICs remain, however, like LICs and LMICs, threatened by non-communicable diseases and old and new infectious-disease pathogens of epidemic potential through cross-border spread. Therefore, UMIC's and HIC's priorities in global cooperation for health are more likely to be to avoid infections that could spread internationally by learning from and applying best practice in each of their own countries; or to control the international movement and sale of illicit substances and products that are harmful to health. UMIC's and HIC's support for health security-related cooperation items such as the 2005 International Health Regulations is also likely to be higher. The 2005 International Health Regulations provide a binding UN framework and mechanisms for international cooperation in health, covering both infectious and non-communicable conditions that have cross-border health effects. Similarly, within this framework, UMIC's and HIC's participation might be higher in efforts such as the Global Health Security Agenda, a partnership of 70 countries of all incomes, international organisations, non-governmental organisations, and private sector companies that represent a voluntary international cooperation to strengthen the world's ability to prevent, detect, and respond to infectious disease threats.[40]

Superficially, improving equity in health outcomes for all people through worldwide cooperation across countries seems unrealistic if we accept that states' central motivation is their self interest, which results in potentially diverging priorities. However, there are interdependencies between social and environmental interventions designed to benefit and protect people's health in all the three agendas. These interdependencies suggest that sometimes the solidarity between states that promotes intersections and reduces fragmentation also promotes synergies at the points of intersection. This solidarity can improve equity in outcomes and can serve self interest. The marked decrease in tobacco use worldwide after the WHO Framework Convention on Tobacco Control, with 168 signatories including the European Community, exemplifies how self interest drives cooperation. Other examples include the global

For the **WHO Framework Convention on Tobacco Control** see https://fctc.who.int/

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cooperation for eradication and elimination programmes for infectious diseases such as polio and measles, improving access to HIV treatment, and ongoing discussions on climate and health. To achieve some of their self-interested goals, states cannot only look inward, they must look outward as well.

Unfortunately, self interest and reflexive self preservation have led states and individuals to look inward, blame each other, and work individually over and above global cooperation. This behaviour is not necessarily always the behaviour that best preserves the continued existence and welfare of the individual and the state. If national interests can be enlightened self interests, they can also be ill-considered self interests. For example, superficially, the arguments for vaccine nationalism as self interest during the COVID-19 pandemic can look quite reasonable. Countries paying for vaccines in advance meant that the vaccines could be produced more rapidly. Given their investment, these countries reasonably gave priority primarily to vaccinating their citizens. However, in an increasingly interconnected world with rapid travel and cross-border spread of infections, for vaccination to be of greatest benefit to any country, global herd immunity across all countries is ultimately needed to prevent serious illness and death in the target population, whether through natural infection, vaccination, or both. Enlightened self interest might better serve the global health security agenda when synergised with universal health coverage and health promotion. Investing in more diffuse vaccine-manufacturing capacity for shared global threats from infectious-disease pathogens and mobilising all populations for vaccination is altruism, but is also self interest.

Vaccine nationalism could well be a catastrophic moral failure,[41] as some have observed, but the phenomenon occurred and persists. If global health—of which global health security is a part—was solely about achieving equity in health for all people worldwide[42] and not also about satisfying national interests, vaccine nationalism would not occur. Recognising the existence of both self interest and altruism is not necessarily negative. There can be a solidarity of self interest that arises from the recognition that, in some instances at least, our individual self interest can be best served by not only looking to our own interests but also to the interests of others. States that contribute meaningfully to achieving equity in health for all people worldwide can be seen as having enlightened self interest.

Moreover, it should be more openly recognised that what is represented as national self interest can mask contesting views within countries about roles and motivations in international cooperation in health. Examples of these debates are found in the cooperation between civil society and states in the global negotiations on access to HIV treatments and in the debates on COVID-19 vaccine equity and access, showing divergence between the wider public, parliamentary, and official state positions and interests in global negotiations.[43–45] The recognition that self interest and altruism affect global, national, and subnational cooperation for health can help us move towards decolonised global health.[46] Recognition can help inform calls to remake global health[47] and move towards a situation where all states involved in international-health cooperation would be recognised as partners contributing to each other's achievements with an understanding that sometimes solidarity is enlightened self interest, and can be of benefit to all.

Centralised decision making, colonisation, and decolonialisation

Colonisation refers to the use of power, often in top-down approaches, for political, economic, socio-political, or cultural subjugation and domination of groups, institutions, and individuals by others.[48–50] Colonisation is perpetuated through imbalances in power between actors. Power can be used to influence decision making, to prevent decisions being made (power as non-decision making), and in ideological ways such as propaganda and narrative control, effectively dominating and subjugating thinking and culture (ways of doing things).[51] The coloniser's ways of doing things are framed and promoted as inherently superior to the ways of the colonised. Decision making about priorities and their implementation, which occurs remotely rather than at the geographic point of need and without the meaningful engagement and participation of those affected by the issue, often reflects colonial and neocolonial frameworks.

The use and misuse of power to dominate, exercise control over others, and reduce their agency (ie, independent action) is recorded throughout history across all continents and is not unique to our times. The Assyrian, Babylonian, Chinese, Cushite, Egyptian, Greek, Mughal, Japanese, and Roman empires, among others, have all to various degrees at one time or another in history tried to or succeeded in dominating their neighbours, holding them subject to their own governance and taxation systems, language, culture, norms, and priorities. Throughout history, the colonised have largely resented this treatment and rebelled and resisted against domination, albeit sometimes without dismantling the economic dimensions, sociocultural inequalities, or development models that were imposed on them as part of colonialism.[52]

The historical context of colonisation is important to global health for multiple reasons. First, without historical context, there is a danger of an implicit and sometimes explicit assumption that the thinking and attitudes that drive colonialism and how power is used or misused are exclusive to the present, rather than reflecting a non-unique human tendency to abuse power in our dealings with each other when individuals and nations grow powerful enough. Second, in complex adaptive systems such as health and other social systems, historical context matters in how interventions play out and what results are produced.[53] Understanding how health systems function

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and their outputs in the present requires an understanding of the past and decisions and actions that occured several decades ago but whose effects continue to play out. As an illustrative example, Canada and the USA, countries with similar economic statuses that evolved from migration initially mainly from Europe and subsequently from all over the world, chose very different paths to health insurance reform between 1940 and 1965. Since then, Canada has moved to near universal health insurance coverage while the USA continues to struggle with how to handle its large numbers of uninsured individuals.[54] History affects social and structural determinants, which in turn influence population health.[55] History is an important influence on the underlying contemporary world economic order, global political economy, and market and structural forces. These factors form the context for global health agendas and shape the efforts of states to implement (or not) actions synergistically (or not) at the intersections between the agendas, thereby shaping their subsequent results.

Colonial and neocolonial influences in global health are reflected in many areas, such as development assistance and economic and trade interactions. These factors generate centres and peripheries of political power and economic resources in the global political economy, which influences many sectors, policies, and conditions that affect healthy lives and societies. For the health sector, these wider political-economy dimensions can affect social and fiscal conditions, the availability of skilled health workers, and control over the production of and equitable access to essential health technologies and products.[50,56] In relation to development aid and technical cooperation for the health sector, colonialism can manifest in implicit and explicit thinking and frameworks and practices along the lines of countries believing that they have superior systems, resources, and power in all respects and need to protect themselves from other countries with weaker systems and less resources from which they believe global health threats can emerge and threaten them. In the framework of such thinking, countries might also reason that they are providing financial and other assistance to the countries with so-called weaker systems and less resources through targeted interventions that they believe can rapidly protect from potential threats at the lowest possible cost. These countries with weaker health systems and resources will also benefit from this protection and might therefore be seen as beneficiaries. That the assistance is not completely free and beneficiary countries end up bearing some costs, including in some cases financial costs, is not necessarily recognised. In colonial approaches, countries seen as having weaker systems and less resources need to be guided and advised to do things in the ways that powerful countries deem important and necessary, including for security, economic, and political interests. The current ways of doing things mean that targeted short-term interventions that yield quick and visible results are the dominant approach in providing support to lower resource countries. Long-term systems building with more attention to universal health coverage and enabling healthy lives, which could better ensure sustainability and population health impact, are not dominant priorities. Lower resource countries are expected to contribute part of the money needed and staff to do the stipulated work, since these efforts protect them, along with the rest of the global community. Published reports about global health achievements focus on how the contributions of higher resource countries have helped lower resource countries, using terminology such as strong and weak, and they often ignore or marginalise local ideas, initiatives, and contributions. The terminology of donors and recipients reinforces these frameworks of a one-way flow of resources and expertise from the supposedly strong to the weak and does not recognise that the supposedly weak are also major potential and actual contributors to achievement, and indeed to the outflow of a range of resources from LICs to HICs.[57]

This kind of implicit and explicit thinking produces counterproductive results no matter how good the intentions. Perceptions by some stakeholders that their perspectives, concerns, and interests are marginalised or subjugated by other stakeholders fuel a lack of trust that can prevent collaborative actions that would benefit all involved being done in a timely manner. For example, perceptions that the International Health Regulations primarily benefit industrialised countries explain, in part, the poor global engagement and solidarity towards health security—as the International Health Regulations review done after the west African Ebola outbreaks in 2013–2014 revealed.[58] The fallout from inadequate universal engagement with the International Health Regulations has been that many countries of all incomes have struggled to control COVID-19. Moreover, globally, appoaches to successfully contain the disease have been documented in countries of all income levels and have had mixed results rather than HICs consistently having greater success.

Colonial style decision making is not just a driver of fragmentation and failure of synergies at intersections in global health; it also has a role at the national and subnational levels in countries, including many industrialised countries. For example, in these countries, political or other decisions disproportionately allocate resources to politically advantageous facilities, but at the same time decrease the funds available for public health or health promotion.

Theoretical or conceptual and analytical framework

To develop a conceptual and analytical framework for the analysis, the Commission drew on the concept of an intersection (figure 1). Intersections are the areas or points where efforts towards one agenda overlap with and can potentially influence efforts needed towards one

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or more of the other agendas. Intersections are therefore the arenas where synergies or their converse, which we refer to variously as dis-synergies, antagonisms, and tensions between the three agendas can potentially occur. Context refers to the circumstances that form the setting for an event, statement, or idea, and the terms in which it can be fully understood. A synergy can be understood as a situation in which an intervention, institutional capacity, or policy has an intersection with and a substantial positive effect on the achievement of the desired outcomes in at least two of the three agendas of universal health coverage, health security, and health promotion. Synergy can also exist when an intervention, institutional capacity, or policy has substantial positive influence on central functions or capacities that are shared among at least two of the three agendas. A synergistic approach is one that maximises synergies and minimises antagonisms, dis-synergies, or tensions.

Fragmentation, whether at global, national, or subnational levels, results from ignoring intersections, synergies, and the whole health system, within which specific health agendas are implemented. Policies, programmes, and interventions are skewed to maximise the achievement of specific goals and agendas at the expense of others that are also essential for health outcome improvement. The terms fragmentation or fragmented are commonly used in global health scholarship,[59–61] but are not often defined. If fragmentation means “the action or process of breaking something into small parts or of being broken up in this way”,[62] then it presupposes the existence of something that was or could have been whole. Fragmentation is often considered to have only negative effects on health systems. We suggest a value-neutral usage that acknowledges that fragmentation exists in all systems and that the question is whether a given level of fragmentation is beneficial or detrimental. However, we argue that a high level of fragmentation makes coordination between actors, programmes, initiatives, and policies with related or similar goals more necessary and more challenging. Fragmentation is a pulling away of agendas from each other, reducing intersections (figure 1). In complete fragmentation there would be no overlap between the circles. Systems, policies, and institutional capacities can either increase intersections or decrease intersections (fragmentation). Additionally, where there are intersections between agendas (regardless of the extent of intersection) health systems, health policies, and institutional capacities can have no effect on (ie, neutral), increase attainment of (ie, positive effect), or minimise attainment of (ie, negative effect) synergies.

Global-health agendas are implemented within health systems. Health systems are complex and adaptive, with close-knit linkages, relationships, interactions, and behaviours.[63] To intervene effectively in such systems with the goal of improving population health outcomes requires understanding and a focus on maximising the functioning of the whole system rather than of selected components at the expense of the whole. Focusing on a particular agenda without considering the potential effects on or changes it can make to other agendas also being implemented in the same health systems can be counterproductive. A systematic qualitative analysis[64] assessed the effect of polio-eradication activities in seven countries in south Asia and sub-Saharan Africa on key health-system functions such as routine immunisation and primary-care functions. Polio was chosen as it is an infectious disease explicitly included in the International Health Regulations framework.[65] There was generally no compelling evidence of widespread positive or negative effects of the polio eradication campaigns. However, in districts with many polio-eradication campaigns per year, negative effects were observed, mainly in the form of service interruption and public dissatisfaction.[64]

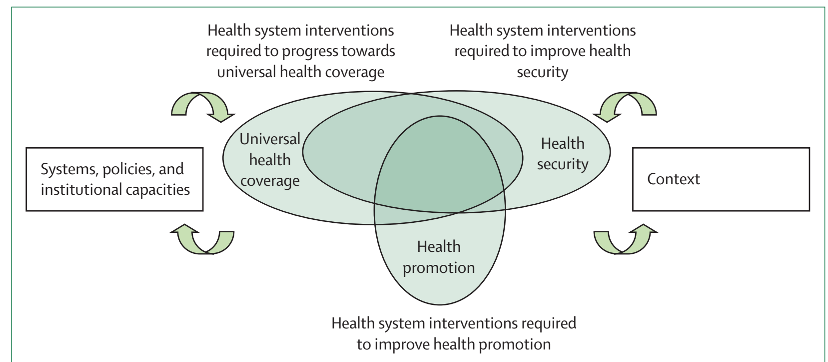

Figure 1: **Theoretical, conceptual, and analytical framework of fragmentation between the agendas and synergies at agenda intersections in global health**
A type of Venn diagram of three circles with each circle representing one of the agendas and the areas of overlaps between the circles as the intersections and therefore areas of potential synergies. Context, systems, policies, and institutional capacities at global, national, and subnational levels can increase intersections or decrease intersections or fragmentation.

Although the current literature contains many examples of synergies at various intersections between the three agendas, most examples seem to be theoretical, rather than based on empirical observations. The literature also seems to mostly contain examples of synergistic interactions between systemic components rather than synergistic effects of specific interventions. Among the few empirical examples we found in the literature, intersections between universal health coverage and health security were identified, in which community-health workers improved the resilience of communities during outbreaks and did both curative and preventive actions;[66] disease-specific eradication campaigns strengthened routine immunisation; and disease-specific eradication campaigns avoided interrupting regular service delivery and access.[64,67] An example of an intersection between health security and health promotion is community-health agents that are deployed to extend the reach of primary care by implementing health-promotion functions.[68]

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In theory, identifying intersections that are synergistic can help to align efforts and optimise the use of scarce resources. Ideally, synergies should result in better health outcomes at a lower cost. Kluge and colleagues[69] argue that efforts toward universal health coverage support health security outcomes, among other outcomes, by

	Research questions and objectives	Study design	Data collection methods and analysis
Bangladesh	(1) What are the characteristics of universal health coverage, health security, and health promotion in Bangladesh in existing policy and practices, focal agencies, key actors, synergies in the agenda triangle, and gaps that need attention? (2) What are the perceptions and experiences of the relevant stakeholders in policy and practice regarding the agenda triangle, both when these are aligned (ie, synergies) and not aligned (ie, fragmentation); (3) What are the challenges of overcoming these gaps to build synergy and how can consensus on these issues be made? (4) How can we develop a unified health system that is people centred, equitable, financially protected, and resilient to infectious disease threats and anti-microbial resistance?	Qualitative case study; purposive sampling of policy makers and practitioners involved in the implementation of the three agendas under the Ministry of Health and Family Welfare	11 policy makers in key informant interviews and eight policy makers in a round table discussion; desk review of grey and published literature; stakeholder validation forum to discuss finding from key informants and desk review; thematic content analysis with triangulation of data
Brazil	(1) To map the global health actors working in Brazil and to assess their ability to influence national agendas; (2) to show the uniqueness of Brazil's position on universal health coverage, health security, and health promotion, seeking to identify the effect they had or have in the country, and above all to identify the main national actor's perceptions of them; (3) to analyse a real event with the potential to reveal synergies and tensions between the three agendas: the Brazilian response to the Zika-related Public Health Emergency of International Concern, regarding the UN Population Fund-led campaign "More Rights, Less Zika"	Qualitative case study; purposive sampling of actors most active in the three agendas in Brazil (eg, state, international organisations, businesses, and non-governmental organisations); field research in Recife (Pernambuco, Brazil), the region hardest hit by Congenital Zika syndrome	19 key informant interviews; desk review of grey and published literature (91 articles reviewed); thematic content analysis with data triangulation
Ethiopia	(1) To document Ethiopia's efforts to align universal health coverage, health security, and health promotion within its health system; (2) to understand Ethiopia's efforts to lead synergies through health systems analysis; (3) to identify social, political, and economic conditions that could facilitate synergy in Ethiopia	Qualitative case study (ie, key informants and document review); purposive sampling based on leadership experience of previous and current policy makers in the Ethiopian health system and academics	Six key informant interviews; desk review of grey and published literature; thematic content analysis; data triangulation
Ghana	(1) To describe what fragmentation and synergies between universal health coverage, health security, and health promotion occurred in Ghana's health systems in policy and programme agenda setting, formulation, and implementation (2000–2018); (2) to analyse how and why the fragmentation and synergies occurred; (3) to identify which health system functions or building blocks such as financing; infrastructure; equipment; tools and supplies; and information systems and software such as stakeholder power, interests, and ideology and values, components were of relevance for reducing fragmentation and increasing synergies; (4) to identify contextually relevant solutions for reducing unrealised synergies in Ghana's health system	Qualitative case study; purposive sampling of national and sub-national health systems actors in government, development partners, and civil society organisations	28 key informant interviews; desk review of grey and published literature; stakeholder validation forum; thematic content analysis with data triangulation
Guinea	(1) To describe the problem of fragmentation and unrealised synergies in Guinea; (2) to analyse why the problem of fragmentation and unrealised synergies occurs; (3) to identify where solutions can be found and to identify related actors; (4) to identify which health system functions or building blocks such as financing; infrastructure; equipment; tools and supplies; and information systems and software such as stakeholder power, interests, and ideology and values are of relevance for achieving synergies	Qualitative case study	18 key informant interviews with people from six institutions; desk review of grey and published literature; thematic content analysis with data triangulation
Rwanda	(1) To describe the problem of fragmentation and unrealised synergies in Rwanda; (2) to analyse why the problem of fragmentation and unrealised synergies occurs in the Rwandan Health Sector; (3) to identify where solutions can be found and related actors in Rwanda; (4) to identify which health system functions or building blocks such as financing; infrastructure; equipment; tools and supplies; and information systems and software such as stakeholder power, interests, and ideology and values, are of relevance for achieving synergies	Qualitative case study; (key informants and document review); purposive sampling of key stakeholders in the Rwandan health system	15 key informant interviews; grey and published literature review; thematic content analysis; data triangulation; READ approach[74]
Sierra Leone	(1) To describe what fragmentation and synergies between universal health coverage, health security, and health promotion occurred in Sierra Leone's health systems in policy and program agenda setting, formulation, and implementation (2000–2018); (2) to analyse how and why the fragmentation and synergies occurred; (3) to identify which health system components were of relevance for reducing fragmentation and increasing synergies; (4) to explore whether and how post-war reconstruction and post-Ebola health security agendas could be increasing (or not) fragmentation in national-health policy making and paucity of agency for national and local authorities to set their own agendas in Sierra Leone; (5) to identify contextually relevant solutions for fragmentation and synergies in Sierra Leone's health systems	Qualitative case study; purposive sampling of interviewees in the Ministry of Health who work at the district level	20 key informant interviews; grey and published literature review; thematic content analysis with data triangulation

(Table 1 continues on next page)

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	Research questions and objectives	Study design	Data collection methods and analysis
(Continued from previous page)			
Thailand	(1) To analyse the interlinks and alignment between Universal Coverage Scheme managed by the National Health Security Office and health security managed by Ministry of Public Health; (2) to analyse the contributions of health-systems capacities and resilience to successful implementation of the Universal Coverage Scheme and health security	Qualitative case study	Grey and published literature review; stakeholder forum; two group discussions, one with three Thailand health-systems experts, and the other with five; thematic content analysis; data triangulation
Uganda	(1) What are the characteristics of universal health coverage, health security, and health promotion in Uganda concerning existing policy and practices of key actors? (2) How are the universal health coverage, health security, and health promotion agendas synergised or fragmented in Uganda and what are the causes of such synergies or misalignments? (3) What are the challenges to overcoming these misalignments and building synergies and a harmonised approach to the three health agendas?	Desk review in the context of the development of a book on universal health coverage by a team of Ugandan experts	Grey and published literature review; stakeholder validation forums; thematic content analysis; data triangulation
Yemen	(1) To explore and documents the different forms of fragmentation in the Yemeni health system; (2) to evaluate the effect of health-system fragmentation on the implementation of health policies in Yemen across the global agendas of universal health coverage, health security, and health promotion in the context of WHO's priorities achieving universal health coverage, addressing health emergencies, and promoting healthier populations	Qualitative case study; purposive sampling	19 key informant interviews; grey and published literature review; thematic content analysis; data triangulation
Zimbabwe	Overall: policy analysis of potentials, enablers, challenges, and barriers of the process and content of the reform of the Public Health Act for building synergies between universal health coverage, health security, and health promotion; specifically, focus on national level factors in terms of: (1) the functions or building blocks such as financing, infrastructure, equipment, tools and supplies, information systems (hardware) of the content of the law in relation to the health-system building blocks for universal health coverage, health promotion, and health security; (2) the way the review process clarified and enabled the health systems software such as stakeholder power, interests, ideology, values, principles, rights, understanding, and relationships to foster synergies across these different health-system functions; (3) the enablers and challenges within national-level processes and in engaging with global-level resources; (4) the potentials and challenges for implementing the Public Health Act as an integrated, comprehensive umbrella law covering health promotion, health security, and universal health coverage	Mixed-methods cross-sectional case study	Desk review of reports; content analysis of legal documents; key informant input during stakeholder review meetings; thematic content analysis with data triangulation

Table 1: **Summary of 11 low-income country, lower-middle-income country, and upper-middle-income country case study objectives and methods**

"preventing outbreaks through high immunization coverage, providing early alert by rapid access of all patients to healthcare, better response thanks to reliable infrastructure and healthcare workforce for case management". Improved health security, in turn, supports universal health coverage "by avoiding health crises that prevent patients accessing healthcare".[69]

Context can modify how and why decisions are made and done at all levels from community to global. Interventions that are synergistic in one context might be antagonistic in another context and vice versa. To analyse and understand intersections and fragmentation, synergies, and dis-synergies or antagonisms at intersections, we must understand context.

To explore country contexts and how they influence synergies and fragmentation, the Commission drew on Leichter's[70] classification scheme of environmental, situational, structural, and cultural aspects of contexts. Environmental context describes global factors external to a country, such as international political environment and international agreements, obligations, and pressures (eg, the SDGs). Situational context refers to "a more or less transient, impermanent, or idiosyncratic condition or event that has an impact on policy [decision making]".[70] Examples include wars and conflict; terrorism; economic cycles; and natural disasters such as epidemics, droughts, floods, oil spills, and earthquakes. Structural context refers to the "the more permanent and persistent features of a system, such as its economic base, political institutions, or a demographic structure. These features have a more sustaining and, therefore, generally more predictable impact on policy [decision making] than situational factors."[70] Examples include political, macroeconomic, social, demographic, and ecological structures. Cultural and sociopolitical context refers to "the value commitments of groups within the community or the community as a whole".[70] Examples include norms and values; national heritage; formal and informal political cultural norms and values concerning the role of the individual and the state; and traditional social values relating to social institutions such as marriage, family, gender roles, religious values, and religious institutions.

Methods

The Commission can be described as a mixed-methods case study of intersections and fragmentation, synergies,

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and dis-synergies, where intersections occur at the global, national, and subnational level in the decision making and implementation of universal health coverage, health security, and health promotion. The agendas are such a complex and essentially social phenomenon that they can only be explored and understood within their real life context thus a case studies approach is particularly suitable for their research. This approach allowed the Commission to develop concrete, context-dependent knowledge and to obtain and analyse multiple perspectives and experiences for a wide range of different stakeholders and social processes.[71–73]

Within the overarching context of a global case study, we had multiple embedded subunits of analysis or subcases. These subunits of analysis or subcases included 11 LIC, LMIC, and UMIC case studies (table 1); a case study of national public-health institutes; and a case study of synergies and fragmentation in COVID-19 responses in the early phase of the pandemic (before the evolution of multiple variants that created multiple new waves). We also did a global case study of multilateral institutions and considered whether their efforts have promoted intersections or fragmentation and synergies or dis-synergies at agenda intersections. The Commission also explored how the approaches and efforts of four HICs that provide development assistance for health foster intersections or fragmentation, and synergies or dis-synergies at intersections. Finally, the Commission did three global stakeholder validation consultations to validate findings and conclusions with potential users at various stages of its works.

Data collection and analysis approaches

National-level and subnational-level case studies

A total of 11 countries with World Bank income classification as LICs (ie, Ethiopia, Guinea, Sierra Leone, Rwanda, Uganda, and Yemen), LMICs (ie, Bangladesh, Ghana, and Zimbabwe), and UMICs (ie, Brazil and Thailand) were purposively selected as country case studies. Apart from ensuring a mix of differing levels of gross national income (GNI) per capita (measured in US$), the criteria for purposive selection required the inclusion of at least one country from WHO's African region, Eastern Mediterranean region, South-East Asia region, and region of the Americas. The criteria also included representation of conflict-affected, and post-conflict-affected states, states affected by the 2014 Ebola outbreak, and states with the availability and willingness of Commissioners or advisors who could lead or facilitate the identification of a lead researcher for the country's case study. States from WHO's European region and Western Pacific region were not included because in the initial thinking of the Commission, the problems of synergies and fragmentation appeared to be predominantly problems in LICs, LMICs, and possibly UMICs rather than HICs. As the work of the Commission proceeded and subsequently as the COVID-19 pandemic evolved it became clear that this initial thinking was a mistake. Fragmentation between agendas and synergies at points of intersection appeared to be challenges across countries at all income levels; however, it was too late to organise in-depth country case studies in HICs.

All 11 case studies drew on data from document reviews, which included published papers in scientific journals, grey literature, and websites of ministries of health, health agencies, and development partners and civil society organisations in health among others. Additionally, nine of the in-depth country case studies involved face-to-face, telephone, online, or email key-informant interviews with purposely selected policymakers, implementers, and other relevant stakeholders based on semi-structured topic guides. Ethical approval for primary data collection in all country case studies was obtained from the relevant country-level ethics review committees. All data were collected between August, 2019, and April, 2020. In six of the country case studies, the researchers held stakeholder events to elicit further insights from expert stakeholders or to validate emerging findings.

An exploratory scoping review and key-informant interviews were made use of to provide an overview of the characteristics, actual roles, and potential roles of national public health institutes in synergies.

Stakeholder validation events

The Commission opportunistically used several subregional meetings in Africa to present the work of the Commission to stakeholders and obtain their feedback and validation. The Commission had also wanted to use the January, 2020, Prince Mahidol award conference to similarly hold a consultation in Asia, but the plans fell through at the last minute because of funding and time constraints. The first event in Africa with representation from the Commission was the Second WHO Africa Health Forum in Praia, Cabo Verde (March 26–28, 2019). A member of the writing team (HBA) attended on behalf of the Commission and presented its aims and conceptualisations for comments and feedback.

The second event was the 69th East, Central and Southern Africa Health Community (ESCA-HC) Conference of Health Ministers in Lusaka, Zambia, on Feb 19, 2020, where the Director General of ECSA-HC, Professor Yowisa Dambayisa, created a special session in the programme for the Commission's consultation. Participants of this event included health ministers and senior health ministry officials from the nine member countries and beyond, and bilateral, multilateral, and non-governmental agencies. The Commission presented its aims, approach, and methods together with key findings, which was followed by a discussion. The discussion observed the Chatham house rule, and its aim was to stimulate reflection and discussion to test the validity of the emerging findings and gather further information to

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help improve the Commission's work. The Commission had also planned consultation at the 2020 Economic Community of West African States Conference of Health Ministers. Unfortunately, COVID-19 arrived in early 2020 and resulted in its cancellation. However, the Director General of the West African Health Organization (WAHO), Professor Stanley Okolo, generously consented to an online meeting which was held virtually on June 26, 2020, with Professor Okolo and his leadership team, to elucidate on and validate the Commission's findings with regard to WAHO's regional-health collaboration efforts.

Global-level case study methods

The global-level case study involved a desk review and key informant interviews. Between 2018 and 2021, a non-systematic literature review of English language published journal articles, grey literature, and websites based on web and PubMed searches was done. This search involved the use of multiple permutations of key terms including "synergies", "fragmentation", "coordination", "harmonisation", "alignment", "international development", "health", and "aid effectiveness". Additional sources were then identified from citations within this literature. 20 semi-structured expert interviews with individuals representing bilateral agencies, governments, academic and research institutions, multilateral agencies, and global health initiatives were done in 2019. The same two members (NS and GO) of the Commission did all the interviews for consistency. Respondents were purposively sampled; they held senior posts, had extensive in-depth specialist knowledge, and represented all country-income levels. Six women and 14 men were interviewed. The interviews were done face-to-face, by telephone, or via Skype or Zoom using a semi-structured topic guide. Ethical approval for the interviews was granted by the London School of Hygiene & Tropical Medicine's Ethical Committee.

HIC case studies

Four HICs, Germany, Japan, the UK, and the USA, were purposively selected for a study of synergies and fragmentation in HIC global health programmes. These countries were chosen because they are G7 members and they collectively contributed 47% of the total development assistance for health collected in 2019.[75] Pragmatically, there were also members of the Commission willing and able to lead case studies from these countries. Three-quarters of the way through the work of the Commission, as the data came together and the COVID-19 pandemic evolved, it became clear that HICs also have national and subnational challenges with missed synergies at intersections and fragmentation between the three agendas. As we were so late into the work of the Commission, the kind of in-depth case studies that had been completed for the 11 LICs, LMICs, and UMICs could not be replicated for the HICs. We note this as a limitation of our analysis, but also draw attention to this issue to inform future research and analysis.

COVID-19 case study

The COVID-19 pandemic began about three-quarters of the way through the work of the Commission, and highlighted and confirmed many of the points that the Commission had already noted. Because of this confirmation, an additional case study on the early response to the COVID-19 pandemic was done. We used a non-systematic qualitative review of grey and published literature on the global experience of COVID-19, data analysis from the Global Burden of Disease (GBD) COVID-19 study,[76] and observations provided by the country case-study teams. COVID-19 was studied as a natural experiment to test our theoretical generalisation that development of comprehensive and resilient health systems in which synergies between health security, health promotion, and robust universal health coverage are supported makes good population health sense. The Commission also drew on data from the IHME GBD database for this case study.

Overview of the Commission's process

The Commission's process of working involved two face-to-face meetings of all Commissioners, with the first in London, UK on Sept 10–12, 2018, and the second in Heidelberg, Germany on June 3–7, 2019. At each meeting, 3–4 h were used to interact with a group of advisors, discussing ideas with them for validation. Subsequent face-to-face meetings had to be cancelled because of COVID-19. Instead, the Commission replaced the planned face-to-face meetings with a virtual meeting that involved meeting online for 3 h each day over 4 days between May 11–14, 2020. A second online meeting comprising two sessions of 2 h each was held on March 3, 2021. Additionally, throughout the Commission's lifetime the core leadership (GO, IA, AJ, TO, and DH) and drafting team (NS, HBA, LH, and SM) had a weekly virtual touch base meeting that lasted between 15 min and 60 min depending on the stage of the work and the agenda for discussion.

Findings

Synergies and fragmentation at the national and subnational levels

In this section, we present the Commission's findings and analysis at national and subnational levels related to our first three questions of what intersections, potential synergies, and fragmentation occur between the three agendas of universal health coverage, health promotion, and health security; how and why are potential synergies realised or missed at intersections; and what systems, policies, and institutional capacities can promote beneficial agenda intersections and synergies? We draw on data from the 11 LICs, LMICs, and UMICs, in-depth national and subnational level case studies, the COVID-19

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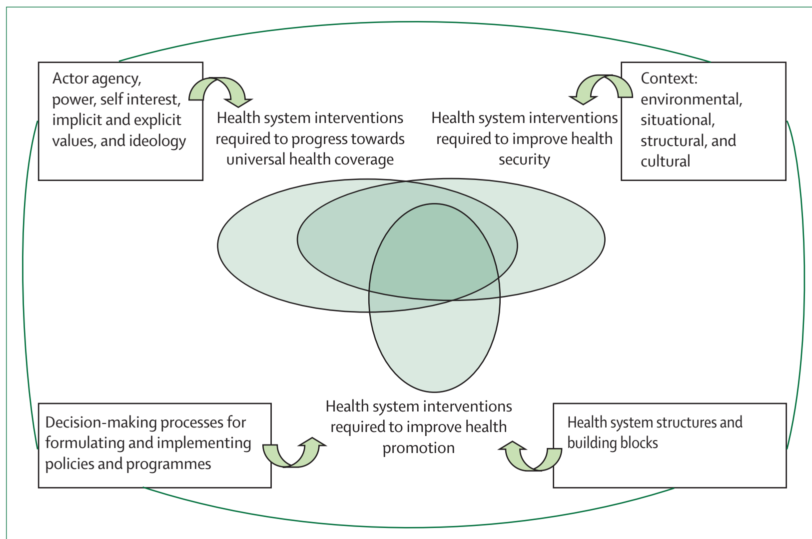

Figure 2: **Summary of the Commission's findings at the national and subnational levels on factors influencing fragmentation between the agendas and synergies at agenda intersections in a modification of the theoretical, conceptual and analytical framework**

case study, the case study of national public-health institutes, and three subregional-level consultations.

National-level and subnational-level actors and institutions have a central role in policy and programme decision making, and implementation of universal health coverage, health security, and health promotion. These actors also have the power and agency to influence and prioritise (or not) the efforts needed to realise potential synergies at the intersections of the agendas. When powerful state actors and policy elites strongly prioritise issues and approaches, the chances of them being pushed through to implementation are higher even when there is opposition. For example, the Ghana National Health Insurance Act of 2003 was passed despite scepticism from some powerful global actors who contributed external funding for Ghana's health sector, who saw the reform as a potentially hazardous experiment for a highly indebted country.[77,78] The political priority to establish a national health insurance scheme and attain universal health coverage aligned with the interests of citizens and had widespread support in the country, so policy makers still pushed it through.

Figure 2 summarises the Commission's findings at the national and subnational levels on factors influencing intersections and fragmentation, and synergies, dis-synergies, antagonisms, and tensions at points of intersection. We clustered these multiple, complex, and inter-related factors that interact iteratively into four broad themes related to actors (ie, agency, power, self interest, implicit and explicit values, and ideology); context; decision-making processes; and how health system structures and building blocks are organised and operated. These factors can increase or decrease intersections between the three agendas, and the realisation of potential synergies at these intersections. Context was included because the same factor in one context, depending on the situation with the other factors, can increase or decrease intersections; and where intersections exist can increase or decrease realisation of synergies. Diagrams have limitations, and in the real-world situations in which intersections and fragmentation, synergies, and dis-synergies occur, boundaries are often ambiguous rather than clearly defined.

Context

In Sierra Leone, the adoption of the 17 SDGs by UN member states in 2015 was an environmental contextual factor[70] that enabled stronger synergies between universal health coverage, health security, and health promotion at the country level. The holistic nature of the SDGs made the framing of the country's Medium-Term National Development Plan more broadly focused on all three agendas of health security, health promotion, and universal health coverage. This reframing came with commitments to improving citizen's health as a key priority rather than single items such as reproductive, maternal, new-born, child, and adolescent health-service quality and access, or health security, as single items often exclude other concerns and priorities.

Environmental contextual factors can enable or strengthen synergies at intersections both within and between the three agendas (or not) depending on other factors at the country level. In Rwanda, in response to the Millennium Development Goals (MDGs), efforts and investment were selectively concentrated on infectious diseases (ie, health security) and universal access to maternal health, child health, and nutritional services (ie, universal health coverage). These concerns were addressed not only due to the need for their resolution within the country, but also because they were focus areas recommended by the MDGs and facilitated development assistance for health funding into Rwanda. The Rwandan Government responded more to these well funded global priorities in its health programmes, while other health problems, of equal national concern within the universal health coverage agenda such as the growing burden of non-communicable diseases, received less attention. Attention to potential synergies at intersections between health security and universal health coverage was not explicit.

Conversely, the same international contextual factor the of the MDGs, and subsequently the SDGs, did not affect the way things were done in Brazil, a country much less dependent on environmental contextual factors (such as development assistance for health) than Rwanda. Brazil emphasised that it was already implementing universal health coverage policies and programmes as the SDG agenda closely corresponded to its existing Sistema Único de Saúde (SUS), or Unified Health System.[79] The SUS, which was created in 1989, covers almost the entire Brazilian population with a large

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network of state-run health facilities and is effectively a universal health coverage effort.

Communicable-disease outbreaks are part of situational context. In some countries, such outbreaks have promoted more synergised ways of working. For example, in Bangladesh, low Expanded Programme on Immunization coverage and outbreaks of the 2009 H1N1 influenza pandemic, 2007 and 2013 H5N1 influenza pandemics, Dengue, and Nipah viruses led to improved collaboration and synergised efforts between the different departments responsible for universal health coverage, health security, and health promotion under the Ministry of Health and Family Welfare.[80] A core group of experts from the Bangladesh Ministry of Health and Family Welfare; WHO; the International Centre for Diarrhoeal Disease Research, Bangladesh; and the Institute of Epidemiology, Disease Control and Research were assigned full time to monitor and execute the country's response plan.

The HIV/AIDS epidemic in Uganda led to a general synergistic strengthening of health security and health promotion efforts, including behavioural changes in communication efforts for HIV/AIDS and strengthening promotional strategies and capacities. In Sierra Leone, the 2014 Ebola outbreak resulted in a reframing of health in ways that promoted health security but also involved some tracking relating to health promotion and universal health coverage efforts.

Health systems with strong synergies at the intersections between health security, health promotion, and universal health coverage can mitigate the effects of situational context. Thailand faced several major crises between 2002 and 2015, three of which were communicable disease outbreaks: H5N1 in 2004; H1N1 in 2009; and MERS-CoV in 2015. The impact of these crises was substantially mitigated by strong health-system governance structures with synergies between universal health coverage, health security, and health promotion, which enabled rapid and effective responses. Conversely, situational crises can be devastating to intersections and synergies when health systems are already fragile, fragmented, and struggling to survive.

In Sierra Leone where civil war had further weakened a health system that was already fragile before the conflict, absence of effective synergies between the agendas appear to have increased the country's vulnerability to the 2014 Ebola outbreak. Yemen's health system, weakened and fragmented by the civil war-related humanitarian crisis and concomitant outbreaks of cholera and diphtheria,[81] found it especially difficult to respond to COVID-19.[82]

A country's macroeconomic situation, which is part of the structural context, can enable or hinder synergies. High levels of external funding can reduce synergies at national and subnational levels through tensions generated between interests as different actors push selectively for their agendas without attention to intersections and synergies. LICs and LMICs with weaker capacity, systems, structures, and ability to negotiate, which are often also the countries that tend to be more dependent on external funding, can be especially vulnerable. GNI per capita in 2018, when the case study countries were selected, was clustered at about US$2000 or less for nine of our 11 in-depth country case studies countries, excluding Thailand ($6610) and Brazil ($9140). Health expenditure per capita tends to reflect GNI per capita and was higher in Thailand ($222) and Brazil ($1016), versus the other countries, which spent $100 or less. Reflecting this, development assistance for health was extremely low as a proportion of spending in Thailand and Brazil. Conversely, 49% of total health spending for 2016–2017 in Rwanda was from external rather than domestic funding sources.[83] Before the Ebola outbreak, almost half (47%) of Sierra Leone's health-care funding came from external funders, and the government's flagship Free Health Care Initiative was largely supported by development assistance for health.[84]

However, other data from the country case studies suggest that high levels of external funding alone cannot explain dis-synergies at intersections between the three agendas in health policy and programme decision making and implementation at the national and subnational levels. Where national and subnational actors put more emphasis on receiving development assistance for health than on negotiating synergistic approaches, synergies are more likely to be missed and dis-synergies to occur. In the illustrative words of a key informant from Sierra Leone: "fragmentations are inevitable in the sense that donors [ie, external funders] provide the much-needed resources, and the tendency is that we [ie, national and subnational actors] go for the windfall. [For] example, the Global Fund [...] we went for the money regardless of whether it reflects a priority health need in our country" (unpublished).

Weaknesses in national and subnational systems and institutions including accountability can also lead to missed synergies at intersections. Weaknesses in key state institutions were felt by some key informants in Sierra Leone to have hindered the realisation of potential synergies between the three agendas in Sierra Leone. The Sierra Leone parliament, which has a crucial role in public accountability and oversight, has historically been divided along ethnic lines and was seen by some key informants as having failed to adequately monitor and implement health policies. In Zimbabwe, incremental additions and amendments to the colonial-era Public Health Act, which was first passed in 1924, led to fragmentation of the public health law related to various aspects of the three agendas into multiple laws and regulations over time.[85] This fragmentation confused health and other public-sector personnel regarding their responsibilities and lines of accountability, and impeded efficient coordination between state and non-state actors and attention to synergies between agendas. Conversely,

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Thailand, an UMIC, is a good example of how substantial domestic resources, combined with a clear vision, domestic technical expertise, strong systems, strong institutions, and accountability systems and structures, enabled intersections and all three agendas to be driven and implemented in synergistic ways at these intersections at the national and subnational level.

Politics also emerged as an important contextual factor in the ability to attain potential synergies between the three agendas. For example, in Brazil, politics and political infighting reduced the attention on and the realisation of potential synergies between universal health coverage, health promotion, and health security in the COVID-19 response. State and municipal government responses to the pandemic were systematically obstructed by some of the measures, executive orders, and presidential decrees adopted by Jair Bolsonaro, the Brazilian president at the time, in what sometimes appeared to be defiance against government leaders who adopted disease-containment measures.[86] Emergency funds to states and municipalities were delayed and only a small portion of the pandemic-response funds allocated by congress were actually used.[87] Conversely, in the same context, with increasing visibility of the challenges as the pandemic evolved, support for the SUS in Brazil improved as a result of COVID-19. Media attention on health and health policies (ie, health promotion) and WHO became more prominent in headlines and recognition for the need to invest in public health and the importance of international cooperation subsequently increased.[88]

In Yemen, a LMIC with ongoing conflict, the Houthi rebels took control of the northern Yemeni Government and announced an interim council to govern that part of the country, while the deposed President Adbrabbuah Mansure Hadi declared he was still in office and established a rival government in Aden, which led to two ruling Governments, with each having its own health ministry.[89–92] This ongoing geopolitical situation caused fragmentation and missed synergies as actors struggled to avoid becoming part of the conflict and implement policies and programmes that could be credited to both Governments.

An analysis of political communication and COVID-19 in Brazil and Ghana, as well as of the four HIC case studies (Germany, Japan, the UK, and the USA), suggested that variations in leadership and political culture across countries were reflected in different approaches to communications, response strategies, and, potentially, outcomes.[93]

Agreement on shared values and principles was crucial to the successful revision of Zimbabwe's Public Health Law from an outdated and fragmented colonial document to a modern law promoting better intersections and synergies within the intersections between agendas. Several principles and values were agreed upon collectively at the outset and enshrined in the new law, including respect for human rights and adherence to rights and responsibilities, promotion of justice, equity and gender equity, protection of the interests of vulnerable minors, transparency, accountability, and sustainability. Also important was a framework shift in the focus of the law from more reactive measures to proactive upstream approaches that integrated promotion, surveillance, prevention, control, treatment, care, and rehabilitation, and thereby addressed the range of determinants that affect health.[94]

In Rwanda, performance and accountability were emphasised as core values. District leaders and cabinet ministers signed performance contracts with President Paul Kagame, which included health indicators. Citizen participation in decision making was also a core value of the system. Community-health workers were elected by the population, and management committees of health centres and district hospitals included elected population representatives.

Actors' interests, agency, power, values, and ideology

Actor interests or self interest, agency, power, and the balance between these when different actors interact influence the attainment of potential synergies at agenda intersections. Several key informants felt that power imbalances between global-health actors and actors within LMICs can sometimes make synergies difficult. Factors such as the power of resources held by donors combined with the inability of resource-constrained country governments to say no to funding for interventions outside their strategic frameworks were some of the examples of how power imbalances between global actors and actors within resource constrained countries could sometimes make synergies difficult to achieve. In the words of one of the key informants in the Sierra Leone country case study: "Donors tag their support to health priorities that fall within their strategic framework. The question often asked is whose reality counts?" (unpublished).

Conflicts of interest or self interest and power imbalances can also occur between national and subnational level actors and make synergies difficult. In some cases, the issues border on what Olivier de Sardan[95] describes regarding everyday corruption and the state as practical norms or the dissonance between formal rules and real practices of civil servants and policy elites. For example, in Sierra Leone, it was observed that national actors sometimes used power and processes in ways that undermined synergies. Political machinations, a lack of institutional memory due to politically motivated appointments and reshuffles, and the ownership of clinics by powerful members within health administration, led some respondents to suggest that fragmentation might sometimes be intentional.

Reform proposals that facilitate synergies between the agendas but do not adequately address country stakeholder's interests and concerns can fail despite

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good intentions. In Zimbabwe, although the need to address the challenges stemming from the old public health act was acknowledged, attempts to review the Act in 1993–1994 and in 2008 by different Ministry of Health departments failed, as the revisions proposed were felt to be insufficient or unacceptable to other health actors. By contrast, introduction of a participatory and inclusive process for subsequent review of the Public Health Act facilitated the development of common positions and a convergence of actors promoting the enactment of the new Zimbabwe Public Health Act of 2018.[94,96]

Common interests across national and subnational stakeholders can also promote synergies. For example, in Thailand after the 2004 tsunami and the 2011 floods that affected very large areas and more than 13 million people, there was good coordination across actors in all three agendas to mitigate the impacts and deal with the aftermath.

Some national-level decision makers in the key informant interviews in Ghana felt that fragmentation was inevitable because of resource constraints and the consequent need to prioritise.[97] In Bangladesh, some country actors felt that fragmentation made programmes more efficient, and expressed concern about the assumption that attention to intersections and synergies are necessarily beneficial. In their opinion, fragmentation ensures focus on a given agenda, and, especially in times of crisis, focus could be crucial since it results in better outcomes for the agenda in question. In the key informant interviews, other key informants expressed concern that synergies could lead to undesirable shifts in priorities in a situation of resource scarcity.[80] These views were in the minority of key informants in the primary data. Most key informants interviewed were of the opinion that fragmentation was negative and that intersections and synergies at intersections were needed and possible and needed to be promoted and supported. However, as in all qualitative work, the presentation of all viewpoints is important to ensure objectivity and balance in reporting, analysis, and conclusions.

Processes of decision making and implementation

Policy and programme decision making and implementation processes that engage multiple actors and build awareness, dialogue, and consensus tend to enable more intersections and synergistic approaches at the intersections. In Thailand, for example, the engagement of politicians and financial stakeholders through multisectoral forums, such as disease-surveillance meetings, gradually increased stakeholders' awareness of the need for a synergised response to various health crises. The successful revision of Zimbabwe's Public Health Act was influenced by consultation processes. Building a collective understanding of, and consensus on, public-health principles that could be used in adjudicating the different, sometimes conflicting submissions and the rights, duties, roles, and powers needed for their implementation, was crucial. A review process was also essential and was designed to engage, raise awareness, and build consensus across the different sectors, personnel, and institutions involved in public health, including public and cross-party support for the proposals.

The Uganda Tobacco Control Act 2015[98] led to the establishment of a multidisciplinary committee, including members from health, trade, environment, gender, and education sectors, among others, to advise on the act's enforcement. This approach has ensured that implementation arrangements for tobacco control were enforced in the policies of different stakeholders. Successful synergies in Sierra Leone were thought to result from conscious attempts to ensure that private-sector plans were aligned with the Ministry of Health and Sanitation's annual work plan. This coaction was done by the signing of service-level agreements and monthly partner-coordination meetings overseen by the District Health Management Team in which all health-sector partners took part to avoid duplication of efforts and resources.

Health systems structures and building blocks

Leadership and governance

Health-system leadership and governance can enable or hinder potential synergies both within and between agendas. In Rwanda, government leadership and politically facilitated commitment mobilise innovative financing, including through public–private partnerships, for underfunded programmes, such as non-communicable-disease control, and strengthen health system building blocks shared across agendas such as health information systems and human resources development.[99] Further government strategies included sustaining and increasing national funding for health,[100] and ensuring essential components of the health system (such as salaries) were domestically funded.

In Bangladesh, despite overlaps between the three agendas of universal health coverage, health security, and health promotion in the national policy, each agenda was handled separately by its own ministerial agency with distinct roles and responsibilities. These agencies struggled to effectively coordinate and consolidate activities because of poor communication and collaboration.[80]

Several national and subnational actors who were key informants in the Ghana case study felt that the Ghana Health Service and Teaching Hospitals Act of 1995 (Act 525), which was meant to improve the efficiency of health-sector governance, led to institutional fragmentation in its implementation with comments such as “I think that the biggest fragmentation in Ghana was the [Ghana Health Service–Ministry of Health] split” (unpublished). Before the passing of Act 525, Ghana's health sector was a unitary Ministry of Health that coordinated all public and private providers, implementers, and regulators in the health sector and provided public-sector services. The act created an agency model with a central Ministry of Health

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coordinating a health sector made up of the Ghana Health Service, two teaching hospitals, and multiple private not-for-profit and private self-financing providers and regulatory agencies. Subsequent piecemeal reforms and laws created more agencies, including multiple service-delivery agencies such as the Mental Health Authority, the National Blood Service, and the National Ambulance Service. This fragmentation of the health sector across multiple agencies with weak central coordination reduced intersections and synergies at these intersections in approaches to all three agendas. These problems were compounded by power struggles between agencies for position, resources, and agenda control which tended to worsen fragmentation and be inimical to focusing on intersections between agendas and synergies within intersections.

In Brazil, different tiers of government made governance of the health system challenging. Comprising the Ministry of Health, the 27 Health Secretaries at the state level, and more than 5000 municipalities, SUS management was highly complex due to the heterogeneity of health, social, and economic factors and clashes between political interests at each governmental level. Nonetheless, the partition of government between national and local levels thwarted an even greater catastrophe during Brazil's COVID-19 response; although the federal government denied the seriousness of the disease[101,102] and allowed it to spread to reboot economic activity as quickly as possible, most local governments maintained quarantine measures and prevention campaigns.[103]

The COVID-19 crisis showed that with good governance and leadership LMICs are by no means powerless to act synergistically and effectively, despite major resource constraints. Sierra Leone drew on experiences in dealing with the 2014 Ebola outbreak to expedite the planning process in January, 2020, ahead of the first recorded case of COVID-19 in the country on March 31, 2020. This planning included utilising their Emergency Operations Centre for weekly meetings with stakeholders and international partners for cross-sectoral collaboration, the use of their electronic Integrated Disease Surveillance Response system, which tracked new cases of infectious disease (ie, health security), and the utilisation of health services (ie, universal health coverage). Recognising the potential catastrophic effect of the health security crisis posed by COVID-19 on universal health coverage efforts in a low resource context, Ghana extensively tested its population and traced local outbreaks through an innovative approach known as pool testing, "in which multiple blood samples are tested together and processed separately only if a positive result is found".[104] Guinea drew increasingly on its own resources, and removed taxes on purchases of basic social services for three months (ie, water, electricity, public transport) to alleviate the economic effects of COVID-19 on the social determinants of health that also influence the ability of populations to stay healthy (ie, health promotion).

Effective governance and cross-sectoral coordinated action are important,[105] and silos and fragmented governance systems for health internally in countries of all income levels appear to have influenced pandemic response and outcomes.[106] Case studies of political communication and COVID-19 from Germany,[107] Japan,[108] the UK,[109] and the USA[110] suggest that, as with the LICs, LMICs, and UMICs in our in-depth country case studies internal processes, power, and politics can drive fragmentation or synergies in response to crises such as COVID-19 and, ultimately, health outcomes. Leadership and governance, ideas, ideology, processes, and power probably drive fragmentation and synergies at all income levels and can sometimes make sovereign states fare suboptimally. At the late stage in the work of the Commission, it was not possible to go beyond a non-exhaustive desk review and do country case studies for HICs similar to those done for the 11 in-depth country case studies. However, we highlight the issue as a potential future research agenda on synergies, fragmentation, and their effects on population health.

Resources

Health system resources—human, financial, equipment, tools, and supplies—and information systems are often shared at areas of intersection between the three agendas. The recognition of intersections in the design of systems for allocation and use can drive synergies and fragmentation. For example, in Ghana, the National Health Insurance Scheme is the major policy and programme instrument through which Ghana seeks to achieve universal health coverage and is 92% financed by public tax funds through a National Health Insurance Levy.[111] Ghana has an increasing dual burden of communicable and non-communicable diseases, and treatments for non-communicable diseases like hypertension are one of the big cost drivers of the National Health Insurance Scheme. Several interventions related to health promotion can ensure healthier populations and reduce chronic diseases such as hypertension and expensive complications that require hospital admission. Funding flows for health promotion are also from tax funding but are channelled separately from the National Health Insurance Scheme fund, representing missed synergies at an area of intersection.

There was also sometimes a perception at the country level that failure to recognise intersections and use them to leverage synergies and reduce fragmentation was inevitable because of resource constraints and the need to prioritise. In both the Ghana and Sierra Leone case studies, the narrative from several key informants was that high external health financing (ie, development assistance for health) at the country level was a major driver of failure to recognise and mobilise potential synergies at areas of intersection because financers exert power over their beneficiaries and often have their

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own interests. However, the Sierra Leone National Health Accounts for 2013 shows that personal payments by citizens of Sierra Leone accounted for 62% of total health expenditure. This contribution was higher than from the Government of Sierra Leone general taxes (7%) or external funding (ie, development assistance for health; 24%).[112] Similarly the Ghana 2015 National Health Accounts data showed that 75% of health sector financing was domestic while 25% was from abroad.[113] Personal payments are inequitable; but that does not change the fact that the narrative that arises from examining the National Health Accounts data in both countries should be that citizens are the major financers of the health system, and, if financers exert power over their beneficiaries, then financers interests should be the health-agenda drivers. How issues are framed and perceived can empower or dis-empower (power as thought control) regardless of the facts of an issue. The decision of who should be the primary reference group for health decision makers in resource-constrained contexts is sometimes modified through how data are presented and issues are framed. Individual citizens can find it difficult to come together and organise to assert their interests, which further confounds the decision.

Other systems beyond the health system

Cross-sectoral collaboration enabled synergies in Thailand, where One Health actors worked closely together across human health, animal and other food production sectors, and wildlife surveillance. The livestock sector financially compensated farms affected by the 1997 H5N1 influenza pandemic. Cross-sectoral coordination also included regular drills and exercises and effective communication strategies, as required by the International Health Regulations core capacities, for prevention of public panic.

The multidisciplinary, multisectoral collaboration approach to health promotion against HIV/AIDS in Uganda enabled health promotion for community members as they received contextually appropriate health messages. The achievements of the Uganda National Expanded Programme for Immunisation were attributed to several health promotion efforts, including vaccination programmes, health education, and community engagement.

Implementation of Zimbabwe's public health law implies that the Social Welfare Department's outreach activities to vulnerable groups to support joint outreach activities were implemented by community-health workers and communities. There were also mechanisms for meetings at the permanent secretary and director levels to support coordination across key agencies including the Environmental Management Agency; the Ministry of Environment, Water and Climate; the Ministry of Agriculture; the National Social Security Authority; and the Zimbabwe National Water Authority.[94]

In Yemen, a major obstacle to synergies was poor collaboration and coordination between the Ministry of Finance and the Ministry of Public Health and Population because of the ongoing civil war. 50% of the health budget was paid directly to the governorate health offices without harmonisation with activities of the Ministry of Public Health and Population at the central level, and 26% of the health budget was received by the Ministry of Police, which had its own health facilities for its staff.

Most public-health measures to contain COVID-19 require multisectoral responses linked to health promotion. Measures such as physical distancing, shop and market closures, and lockdowns in almost all our in-depth country case studies made it difficult for people to buy or sell food in markets on a daily basis, which many rely on. Loss of income, food insecurity, and increased hunger are the consequences.[114,115]

Attained synergies at intersections between the three agendas: illustrative Case Studies

Legislation, policy, and systems: Zimbabwe and Thailand

Zimbabwe developed a revised Public Health Act, which was implemented in 2018.[94] Piecemeal revisions had led to fragmented laws of relevance to all three agendas. There was a need to respond to new hazards and current public-health challenges; to reflect on new methods and approaches, primary health-care policy, and involvement of communities and non-state actors; and to address gaps, such as in applying rights and principles. The revision of the law needed to ensure coherence across the range of promotion, prevention, care, and health security, adding an affirmative, proactive, partnership approach to the previous reactive, nuisance, restraining approach of the 1924 act. Multisectoral actors were involved in what was an open and transparent process from community stakeholders through to the national level, with the participation of different disciplines, sectors, and state and non-state actors. The review process built a collective understanding, better awareness, and a consensus about a comprehensive definition of public health that integrated health promotion, universal health coverage, and health security; a rights-based approach to universal health coverage and health security; and a duty to avoid harm relevant to health promotion and health security.

Building coherence across the different functions needed for universal health coverage, health security, and health promotion implied that updates were needed for provisions on the areas of public health covered, the range of actors involved, and the delegation of functions to and coordination across various sectors involved. Features of the new act that enabled this reframing included ensuring that a wide range of stakeholders were included from within and outside the health sector, while taking sociocultural and institutional diversity into account. An inclusive, multisectoral, and participatory reform process showed fairness and objectivity and was carried forward through the new clauses in the act

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providing for wide participation in the different dimensions of public health. Communities and local authorities were seen to have a crucial role in sustainable, comprehensive approaches. The revised act thus laid the foundation for strong community participation and local authority coordination of different actors, with support from the health sector. The Ministry of Health was required by the revised act to guide and support health promotion in a way that facilitated and encouraged participation and action by communities, other actors, and authorities. Recognising the key role of local-health systems for coordination across universal health coverage, health promotion, and health security at the primary care level, the act required the establishment of health centre committees, which included health worker and community representatives, with functions to inform and empower the community and to bring community inputs and interests into the planning, monitoring, and evaluation of health programmes. At the national level there was a new duty to hold an annual National Consultative Health Forum for all stakeholders to interact, share information, build public awareness, and prepare resolutions for policy consideration on national-health issues and on the performance of the health system.[94]

In a context of low resources and a degree of political and economic volatility, sustainability was enabled by collective technical leadership, by building ownership of and demand for the changes among public-health stakeholders, supported by concurrent training and awareness activities, and by nurturing cross-party support in parliament and the executive levels of government. Systematic implementation of these processes was time consuming, challenging, and burdensome for already overstretched people involved in the processes, especially in a time of unpredictable events. However, implementation was seen as representing an investment in overcoming fragmentation and building synergies, rather than a burden. Recognising the key role of coordination across sectors and stakeholders for a range of areas of joint action on health determinants and services, the new act included provisions for multisectoral forums and issue-focused committees such as epidemic committees, involving the health ministry and other sectors and stakeholders. The processes for the planning and implementation of the law signalled the importance of building acceptance and of ownership of the legal provisions to ensure their implementation, together with investment in leadership and capacities for cooperation, information exchange, joint action, and communication. Within the areas of work that were identified to operationalise the new legal commitments, stakeholders perceived that specific attention needed to be given to building the institutional interactions, interacting information systems, and professional practice needed to put the legal intentions into practice. For example, competencies would need to be built from the community level to the national level in new areas, such as health impact assessments. These system capacities are needed not only in the health sector, but also in sectors affecting health promotion, health security, and universal health coverage, such as agriculture, judiciary, and media. As a cross-cutting principle, there was a consensus that initiatives should first make effective use of what is already in place, using and strengthening existing platforms for coordination; building on existing work, guidance, capacities, and experience; and integrating new information and areas of assessment within existing monitoring processes.[94]

Nevertheless, the 2018 Public Health Act's implementation also had some challenges. Unpredictable domestic and international resources, fragmented funding pools, resources not being available to the agencies responsible for action, capacity gaps, segmented information systems across sectors, and weak integration of the private for-profit health sector in the health promotion and universal health coverage agendas were all identified as barriers that needed to be overcome to achieve the intended goals. The discussions on implementing the act were held before the COVID-19 pandemic, and the extent to which the response, which is still underway, reinforced or diverted from planned reforms and areas of progress set within the new act is still to be systematically assessed. At the same time, several features of the act and of the public-health system were noted to promote synergies between universal health coverage, health security, and health promotion. These features included integrating measures within broader primary health-care services; using the International Health Regulations and other programmes to strengthen laboratory capacities to service the health promotion, health security, and universal health coverage agendas; strengthening electronic health information systems; and building on pooled-funding approaches for universal health coverage. Stakeholders implementing the act also observed that the experience of cross-sectoral cooperation measures, such as on zoonotic diseases, and the experience of managing responses and longer-term prevention and preparation measures for outbreaks and emergencies, has built institutional relationships and understanding that would be assets in addressing any new health security, health promotion, and universal health coverage challenges.[94]

The experience of review and dialogue on the implementation of Zimbabwe's 2018 Public Health Act points to substantial potential for enhancing synergies across universal health coverage, health promotion, and health security by applying a comprehensive, rights-based public-health approach. Such synergies depend on links across actors and levels, and such a system can only be as strong as its weakest component. The issues raised in relation to implementation of the new action points to the importance of investments in the community and primary-care levels of health systems. These issues also suggest that, beyond the health sector itself, capacities in other sectors (such as local government, agriculture, and

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trade) have a crucial role in building the wider coordinated action needed for such synergies.

Strong legislation and clear responsibilities have had an important role in Thailand's success in implementing synergistic approaches to universal health coverage, health promotion, and health security. Thailand has strongly focused on developing its universal health coverage scheme since 2001 and has used universal health coverage as an umbrella concept for all three agendas. The country applied a holistic, needs-based approach in which the focus is first on the services that need to be delivered and then on aligning inputs and financing behind those objectives, rather than letting financing sources determine service delivery organisation.[116] All three agendas were embedded in law: the National Health Security Act (2002) introduced universal health coverage, the Infectious Disease Act (1980, revised in 2015) addressed health security, and the Health Promotion Fund Act (2002) covered health promotion. An agency represented each agenda, thereby promoting leadership and governance, although making effective coordination challenging. The National Health Security Office, a public agency with its own governance and legislative mandates, managed universal health coverage. The Ministry of Public Health via its Department of Disease Control managed health security through public-health and private-health facilities throughout the country. The Thai Health Promotion Office, also with its own governance and legislative mandates, managed enabling healthy lives via the Thai Health Promotion Foundation. Additionally, Thailand's active whole-society approach was the cornerstone of all three agendas, as seen in the cooperation for COVID-19 by all people in the country. Public and private health facilities together provided services for testing, tracing, quarantine, and treatment. Village health volunteers had a key role in the community surveillance of COVID-19. Universal precaution policy was well accepted by all sectors and people; several NGOs and foundations contributed a lot using multiple approaches (eg, running hotlines and providing free transportation). Community pantries or pantries of sharing were set up in various areas of the country as people donated daily necessities to others affected by the pandemic. Activities and campaigns such as those for road safety and injury prevention, HIV/AIDS campaigns, tobacco, alcohol, and unhealthy diet campaigns, and advocacy for healthy lifestyles and physical activity were mainly done through civil society organisations.

The four major crises between 2004 and 2015 (ie, the H5N1 outbreak in 2004, the tsunami in 2004, severe flooding in 2011–2012, and the MERS-CV outbreak in 2015) helped Thailand gradually gain experience and accumulate expertise in prevention, preparedness, response, and mitigation of crises. This experience is the foundation for building Thailand's understanding of alignment and synergies among health security, universal health coverage, and health promotion. These crises also provided opportunities, and the need, for Thailand's health sector to strongly coordinate with other sectors.

The COVID-19 pandemic is the most complex crisis the globe has ever faced. Initial information about COVID-19 was scarcely available at the beginning of the pandemic, which made it challenging for Thailand to manage the pandemic. However, Thailand's flexible and adaptive administrative-management systems enabled the country to quickly respond to rapidly changing demands and carry out urgent policy decisions, ensuring that professional staff understood their roles and responsibilities and that clear communication was broadcast to society to reinforce the importance of health security, universal health coverage, and health promotion.

Long-term investments in Thailand on the three agendas in health infrastructure, human resource capacity, and delivery systems yield substantial dividends, ensuring the existence of the robust and well resourced medical and public-health system that was essential for dealing with the crisis and maintaining normal health functions. The long-standing training of the health workforce, including veterinarians and wildlife veterinarians, in public health and field epidemiology was seen as a key factor promoting synergies.

Transparency and accountability were important in Thailand during both normal and crucial situations such as the COVID-19 pandemic. For universal health coverage, values such as the right to health and equity are fundamental. For health security, values such as solidarity, active citizens, and high voluntarism are also very relevant. Thailand's holistic approach was also reflected in financing. Universal health coverage was financed through general taxes and not from external funding. Indicators suggest there was decreasing personal health expenditure and increasing domestic funding for health. Health security received designated funding from the universal health coverage scheme. Health promotion also received designated funding via the universal health coverage scheme, including a 2% surcharge on tobacco and alcohol that was directly transferred to the Thai Health Promotion Office's budget.

Thailand has learnt and assembled competencies that enhanced prevention, preparedness, and response, under the cohesive health security, universal health coverage, and health promotion agendas, both for the Thai Ministry of Public Health and among the public. Consistent, accurate, and transparent communication between public sectors and the general public is essential in building trust and increasing public confidence and compliance to public health and social interventions so that crises can be dealt with while essential health services are maintained.

Government and external funder coordination in Rwanda and Ethiopia

Sector-wide approaches were developed in the early 1990s and became popular globally in the early 2000s.[117,118] The

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core of the approach involves bringing together government, external funders, and other stakeholders to develop a single shared-sector plan and to establish targets, strategies, common management, monitoring, evaluation approaches and common funding baskets or pooled funding arrangements to support a shared plan. The aim is to harmonise planning, implementation, and resources, and strengthen common shared systems rather than duplicate multiple independent efforts. Though sector-wide approaches are not so popular in many countries currently, as there is reduced political priority for the approach and integration of some of the principles into national health systems, two countries (Rwanda and Ethiopia) were actively implementing sector-wide approach arrangements in the health sector at the time of the country case studies in 2019. Ghana, a lead innovator of sector-wide approaches in the 1990s, was no longer implementing such arrangements. Many of the development partners engaged in Ghana's sector-wide approach with the Ghana Ministry of Health in the early 1990s, when the country was classified as low income, had moved over time to favour budget support in the Ministry of Finance, and then out of budget support back to programme support, reflecting swings in global ideology and priorities. Additionally, as Ghana's economy grew rapidly in the 2000s and the World Bank reclassified the country as a LMIC, priorities sometimes shifted to economic growth and trade rather than development assistance for health.

In both Rwanda and Ethiopia, key informants saw the sector-wide approach arrangements, such as the Annual Sector Review, sector working groups, and technical working groups, as core to promoting synergies, despite the high external-funder dependence.[119,120] 51–68% of the health sector in Rwanda was externally funded between 2010 and 2017. 49% of the total health spending for between 2016 and 2017 in Rwanda was from external rather than domestic funding sources.[83] Strengthening mechanisms of external-funder coordination with governments to ensure a harmonised national strategy was therefore seen as an issue in Rwanda. In UMICs, such as Thailand and Brazil, or countries that had newly become LMICs, such as Ghana, coordination was not as prioritised as in Rwanda. There were other LICs with high donor dependency, such as Sierra Leone, that were not using this kind of approach. These mechanisms were possible in Rwanda and Ethiopia because of strong national-level actors. Strengthening accountability mechanisms, such as national public-finance-management structures and systems improved external funder confidence, leading to more external funders adhering to Rwanda's state systems rather than creating parallel systems.[120] Rwanda's financing initiatives, including community-based health insurance and performance-based financing,[121,122] contributed to high population coverage of community-based health insurance (83·6% in 2017).[119] State financing for health increased over time and reached the Abuja target of devoting 15% of the annual budget to health made by African heads of state (April, 2001),[119] in 2011, 4 years before the target date of 2015.

The cornerstone of Ethiopia's approach to increasing synergies was the road map One Plan, One Budget, and One Report that established a framework of conditions and responsibilities for the government, donor agencies, implementing partners, and other stakeholders regarding planning, organisation, coordination, and implementation.[123] To generate an effective and efficient single plan, budget, and report, the Ethiopian Ministry of Health closed several of its bank accounts and restructured its budgeting and reporting mechanisms at all levels of the health system.[123] Underscoring Ethiopia's efforts towards strong harmonisation and alignment, was the Joint Consultative Meeting platform, established and led by the Ministry of Health. This platform engaged all external funder agencies through the planning and policy-formulation process from the national level to the district level. Effectiveness and validation were achieved by use of a joint review committee, which evaluated the challenges, activities, governance, and implementation and established lessons learned. Similarly, the inclusion of global, national, and local level actors led to a health-management information system, which enabled constant feedback and revision and thus reduced parallel reporting.[123] Part of Ethiopia's success in synergising the three agendas, therefore, came from a well functioning feedback cycle.

Although Ghana no longer made use of a sector-wide approach, the financial and management systems that were developed under the approach, such as the multistakeholder meetings linked to health-sector reviews, endured and are seen as important coordination mechanisms and approaches that promote synergies between the three agendas.

Coordinated private sector philanthropy and the COVID-19 response in Ghana

The Ghana COVID-19 private sector fund was a private-sector initiated and led philanthropic effort that raised funds from the private sector in Ghana to support the Government's pandemic response. A group of private sector and industry actors, banks, and private individuals, established the fund following the first case of COVID-19 in the country in March, 2020. The initiative was based on the premise that government health experts and providers were competent to respond, but severely under-resourced and that the virus was likely to seriously impact health, livelihoods, and the economy if the Ghanaian Government's control and mitigation efforts failed. The fund took a synergistic approach of interventions that addressed not only the health security crisis, but also the intersection with health promotion and universal health coverage. A year after the first case was diagnosed in Ghana, the fund had been able to raise

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about half (US$8·6 million) of its target of $17·3 million.[124] The fund maintained transparent and accountable processes; it was independently managed by trustees of the fund, subjected to independent external audits, and all donations and expenditures were displayed on the fund's website.

The fund provided personal protective equipment for health workers and public institutions over and above government provision. Additionally, recognising the need for healthier populations, during the 3-week lockdown in the first wave of the pandemic, the fund contributed meals for some of the poorest and most affected members of inner-city populations, such as female head porters and other migrant-subsistence day-wage workers, to mitigate the effect of the temporary loss of their livelihoods. The fund constructed a 100-bed, infectious-disease hospital in Accra, a major epicentre of the outbreak in Ghana, to support the existing health system, which was almost at full capacity at the start of the arrival of the first cases in Ghana during the pandemic, thereby working at the intersection between universal health coverage and health security. The hospital was handed over to the Ghana Health Service of the Ministry of Health to manage as a public-sector infectious-diseases hospital. The Ghana COVID-19 Fund was also used to support a major public-education campaign to reduce the stigmatisation of health workers, COVID-19 patients, and their families that occurred in the first wave of the pandemic. Once vaccines became available, the fund managers explored how to support the government's vaccination campaign.

Community and civil society engagement: Zika in Brazil

In Brazil, vector control was the priority for the federal government in its response to the Zika epidemic. Since the 1990s, Brazil has used the Situation Room approach, in which working groups assess health-related information in physical or virtual rooms to respond to health crises. To detect the effect of Zika on people's lives, particularly those of women, a Room for the Situation, Action and Articulation on Women's Rights, Reproductive and Sexual Rights in Times of Zika was set up by the Pan American Health Organization (PAHO) and the Ministry of Health. This virtual room became crucial in sharing information and engaging in exchange and discussion between government and civil society. Before its establishment, civil society received only partial information and data when approaching government officials.

A combination of lawsuits, petitions, protests, and media campaigns, and the creation of this alternative Situation Room, resulted in an awareness campaign led by the United Nations Population Fund (UNFPA) called More Rights, Less Zika, which was seen as a more synergistic approach than vector control. The campaign argued that women and couples were entitled to decide whether and when they want to have children, regardless of the health-emergency context. With its focus on human and women's rights, the campaign filled gaps in the government response. Communicating directly with grassroots social movements and developing initiatives more in tune with the health of vulnerable populations and their circumstances was essential. Communities and civil society were at the centre of this campaign and activities included provision of more information to women and improved access to health-care services, including safe abortions. The effort, which brought together civil society organisations, government officials, and representatives from PAHO and UNFPA, was seen as an example of good synergies between global, national, and local actors.[125]

Missed synergies at the intersection between the agendas: the COVID-19 pandemic

Public-health emergencies have often exposed both crucial weaknesses and strengths in health systems and institutions.[47] The COVID-19 pandemic highlighted and confirmed that it is not possible for a country to effectively detect, assess, notify, and report a potential pandemic and respond promptly and effectively to a new pandemic—as prescribed by articles 5 and 13 of the International Health Regulations[2]—without ensuring that healthy living, working, and social conditions are ensured and that all people can access good quality basic health services and are thus better enabled to resist severe illness and death from infections.

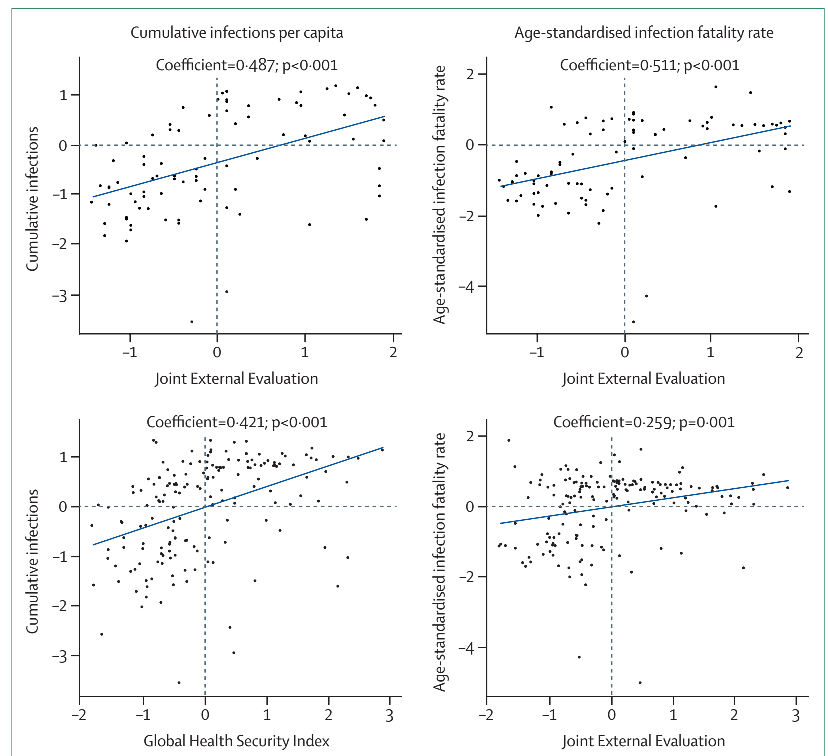

Figure 3: **Joint External Evaluation and Global Health Security Index and COVID-19 cumulative infections and COVID-19 age-standardised infection-fatality rate**
Source: Institute for Health Metrics and Evaluation.

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The Commission used its analysis of the early response to the COVID-19 pandemic to test several theoretical generalisations derived from the conclusions of its pre-COVID-19 analysis, including that it is worthwhile for governments to develop comprehensive and resilient health systems in which synergies between health security, health promotion, and universal health coverage are supported. First, the Commission had theorised that synergies in implementation of the agendas of universal health coverage, health security, and health promotion result in improved population-health outcomes that are greater than the individual agendas on their own, and that country-level indicators of the dimension of universal health coverage or health security alone would not explain performance in COVID-19 outcomes. If high performance on a single dimension could make a difference, it would be expected that if a country has a poorly developed and weak public-health capacity to respond to and control infectious disease threats (ie, health security), then it would be expected to have worse COVID-19 outcomes.

Similarly, if a country has poorly developed systems to ensure universal health coverage, then the safety nets and resilience to cope with an epidemic and still take care of other health problems in the population would be limited; and in the context of a pandemic such as COVID-19, the country would be expected to have worse population-health outcomes for non-COVID-19 conditions.

An accepted global measure of health-security preparedness is the Joint External Evaluation process for pandemic preparedness of the Global Health Security Agenda. The Global Health Security Agenda is a partnership of HICs, LICs, LMICs, UMICs, international organisations, and civil society to speed up progress towards global health security.[40] Universal health coverage is tracked globally with the UHC Effective Coverage Index.[126] The Institute for Health Metrics and Evaluation's GBD analysis of performance in dealing with COVID-19 against the Joint External Evaluation process for pandemic preparedness and the UHC effective coverage index indeed shows that, at best, there is no relationship between performance in either of these agendas and performance in dealing with COVID-19. Indeed, the analysis sometimes showed worse outcomes despite high performance in the single dimensions of any of these indicators (figure 3).[127]

Many countries with high Joint External Evaluation scores and a high Universal Health Coverage Index were unable to sustain an effective public-health response and containment during the first wave of the COVID-19 pandemic.[3] This finding might also reflect the predictive weakness or low validity of the respective indexes rather than the singular point that synergies across the three areas are needed.

If synergies between the three agendas make a difference, it can be expected that countries with high performance for health promotion for their citizens would have lower rates of preventable conditions such as obesity, smoking, and related comorbidities such as hypertension and diabetes that make populations less resilient to infectious diseases threats. If health promotion is important for effective health security, and influences population outcomes in epidemics and pandemics, then we should expect worse outcomes in populations that have few health-promotion process and activity indicators. Comorbidities naturally increase with age regardless of health promotion processes and indicators, so if a country has an older population, then comorbidities will also be higher and worse COVID-19 outcomes would be expected than in a country with a younger population. However, once age is controlled for, if a country has a population with high preventable comorbidity, for example, hypertension, diabetes, or high-risk factors for comorbidity (eg, obesity or smoking, which can be reduced with health promotion processes and activities), then worse COVID-19 outcomes would be expected. Examples of such outcomes would be cases per unit of population, deaths per unit of population, and measures of rate of spread over time. The GBD analysis suggests that these expectations are what is observed globally (figure 4).[3,4]

Despite the innovation and resilience of LICs and LMICs against COVID-19, the pandemic has sometimes

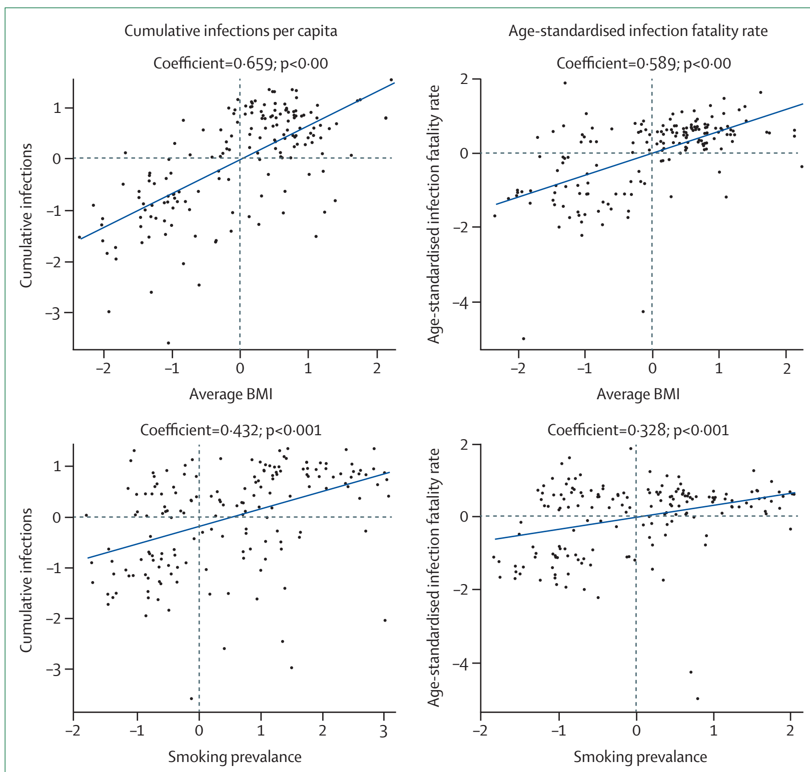

Figure 4: **Obesity and smoking prevalence and COVID-19 cumulative infections and COVID-19 age-standardised infection-fatality rate**
Source: Institute for Health Metrics and Evaluation.

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highlighted and deepened fragmentation between the agendas, especially where health systems were already fragmented or fragile. Insufficient resources—human, financial, infrastructure, and medical supplies—mean that responding to the extra pressure of COVID-19 can cause other health priorities to be neglected. For example, despite Guinea's experience of Ebola, and therefore its preparedness for epidemics, saturation of capacities was quickly reached. In Yemen only 50% of health facilities were fully operable.[114] Insufficient and poor-quality personal protective equipment for doctors, nurses, and other health staff in Bangladesh exacerbated the problems caused by the pandemic and,[115,128,129] in some cases, led to the absence of health professionals or even the closure of outpatient centres.[115]

In Sierra Leone decreased use and constraints of accessing essential health services—especially maternal and child health services—were a major concern. Parents' willingness to vaccinate children against measles and polio severely dropped.[130] Routine health management information system data showed notable declines in the use of essential health services. Reasons included a mix of fear and mistrust, declining health-care quality, the growing number of absent health staff due to exposure, and fear of potential exposure to COVID-19.

Subregional health organisations

Many LMICs are part of intergovernmental subregional organisations whose mandates relate to fostering and promoting cross-country collaboration. The Commission explored the perspectives on intersections between the three agendas and synergies at points of intersection of two of these organisations in sub-Saharan Africa: the West Africa Health Organization (WAHO) and ECSA-HC. These organisation's potential to have an active role in promoting intersections rather than fragmentation between the agendas and synergies at the points of intersection instead of being passive and helpless subjects of global forces can be summarised by the words of Professor Stanley Okolo, Director General of WAHO (2018–2022): "If you position yourself as receiving donor funds and following donor dictates, that is what will happen. If [...] you position yourself as an institution with capacity, integrity, and leverage, who would like to co-create with partners, that is what will happen" (unpublished).

WAHO was established in 1987 by the heads of the 15 member states of the Economic Community of West African States (ECOWAS) with the objective of "the attainment of the highest possible standard and protection of health of the peoples in the sub-region through the harmonisation of the policies of the Member States, pooling of resources, and cooperation with one another and with others for a collective and strategic combat against the health problems of the sub-region".[131] WAHO members embrace different dimensions to multinational coordination, including harmonising policies to address common health problems; pooling resources; responding to epidemics at the regional level; collectively tackling the trade in counterfeit medications; and strengthening collective health research, evidence, and information sharing and knowledge transfer capacities.[132–136]

The body works by consensus, advocacy, peer pressure, coordination and collaboration, and by using its considerable convening power to bring ministers together. However, WAHO does not have decision-making power over states; rather, consensus building, trust, and commitment to ratified protocols and agreements by states, are crucial. At the Assembly of Health Ministers Meeting held in Accra, Ghana, in May, 2022, WAHO reported that 43% of its financing comes from the ECOWAS member states community levy to support WAHO; and 57% from external development partners or global health actors.[137] These global-health actors include the World Bank; the governments of Germany, France, the Netherlands, and the USA; and the Bill & Melinda Gates Foundation.

WAHO's response to COVID-19 has been criticised for not establishing a fully coordinated regional response such as cross-border travel restrictions and shared surveillance efforts; and individual states appeared to be diverging in their policy approaches and arrangements.[138] These limitations, similar to what happened in Europe, reflect the fact that, although ECOWAS is a powerful convener of health-related decision-making forums, sovereignty considerations occasionally supersede regional agreements. Agreed reforms have sometimes been met with resistance in some countries and agreements have been reneged following changing governments in others.[139,140] At times, member states have struggled to find a satisfactory balance between embracing collective efforts and interests, upholding their national sovereignty and interests, and their dependency on global-health actors for finances.[141]

ECSA-HC was established in 1974, and its member states are Eswatini, Kenya, Lesotho, Malawi, Mauritius, Tanzania, Uganda, Zambia, and Zimbabwe.[142] The organisation's mandate is to promote and encourage efficiency and relevance in the provision of health services in the subregion, and its vision is to contribute towards the attainment of the highest standard of physical, mental, and social wellbeing for the region's people. As an intergovernmental organisation, ESCA-HC works through advocacy, capacity building, brokerage, coordination, intersectoral collaboration, and harmonisation of health policies and programmes.[143] ECSA-HC convenes an annual meeting of health ministers and policy advisors.

ECSA-HC established several interventions that enable synergies. These included bottom-up, people and community centred approaches; budget support; and strengthening country-level leadership, government

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structures, and planning. Previous global-level harmonisation efforts such as the Paris Declaration and Accra Declaration were felt to have enabled synergies, as had sector-wide approaches.

Several of the issues that were identified from the country case studies also emerged in the Commission's stakeholder consultation session at the 69th Meeting of Health Ministers and Policy Advisors.[143–145] Drivers of fragmentation included concerns about the proliferation of new global-health initiatives, in many cases without adequate opportunity for input from the countries in the region. Other problems were failures to engage governments, inadequate alignment to local situations, and inadequate coordination across the UN and other multilateral agencies resulting in lost synergies between them. There were also concerns about funding conditions from external funders, which lead to fragmentation, as could issues at the country level, including inadequate domestic technical capacities and weak leadership.[139]

National public-health institutes as potential enablers of synergies

National public-health institutes are a key component in many countries' health systems and are defined as "a government agency (or closely networked group of agencies) that provide science-based leadership, expertise, and coordination for a country's public health activities".[146] Designated as politically neutral, semi-autonomous organisations, subordinate and supportive of ministries of health, these institutes are typically underpinned by legal frameworks.[147]

For the **International Network of National Public Health Institutes** see https://www.ianphi.org/

The International Network of National Public Health Institutes, which has a goal of linking and strengthening national public-health institutes through partnership, aims to improve the world's health by leveraging the experience and expertise of its member institutes, and thus contributes to global solidarity in the development of strong public-health systems. Ten of our 11 case study countries have national public-health institutes (and are members of the International Network of National Public Health Institutes), with some diversity in nomenclature and organisational structure. Although many countries have traditional national public health institutes (ie, Bangladesh, Brazil, Guinea, Sierra Leone, Thailand, and Zimbabwe), some are the result of merged health agencies (ie, Ethiopia and Rwanda), while others have dispersed responsibilities across several agencies (ie, Uganda and Ghana). Yemen has no national public-health institute.

National public-health institutes vary in institutional maturity, size, and scope.[148] Brazil's Oswaldo Cruz Foundation, established in 1900, and now with more than 11000 employees, is one of the oldest and largest national public-health institutes, managing an extensive portfolio of research, teaching, public-health and laboratory services, and vaccine development. By contrast, newly established institutes include the Zambia National Public Health Institute introduced in 2020 and Sierra Leone's National Public Health Agency, established in the wake of the 2014 Ebola outbreak. Both are emerging agencies with narrow mandates, resources, and capacity reflecting the time necessary to develop such institutes.

Historically, many national public-health institutes have been created in response to major public-health outbreaks (eg, SARS and Ebola). Their historical legacy, rooted in laboratory settings, hygiene, and infectious disease control, align them naturally with the health-security agenda.[147] Reflections on lessons learned from past outbreaks have acknowledged the value of national public-health institutes to national-health security and health security.[149,150] National public-health institutes, however, also focus on population (*vs* individual) health, preventive (*vs* curative) efforts, and equitable approaches, showing a propensity towards addressing enabling healthy lives.

A 2022 study,[151] based on 24 interviews with public-health leaders in 18 LMICs, explored whether and how national public-health institutes contribute to synergies between the global health agendas. The study described how national public-health institutes bridge agendas, reporting five strategies that institutes use: serving as a trusted scientific advisor to inform decision making; convening actors across and within sectors; prioritising transdisciplinary approaches; providing training that builds public-health capacity; and integrating public-health infrastructures for multipurpose use. Findings also revealed five enabling factors crucial to success: a strong legal foundation with a multidisciplinary mandate; political will and acceptance of scientific independence; public trust and legitimacy; networks and partnerships at the global, national, and local levels; and access to stable funding.

National public-health institutes are uniquely positioned to generate knowledge, research, and data; respond in health crises; promote healthy behaviours; and engender trust by remaining scientifically grounded. Although national public-health institutes have shown that they fill a crucial gap by providing essential coordination, guidance, and leadership during public-health crises, they also provide value through their work to national country health systems in non-crisis times. The case for institutional development in public health was put forth by researchers in 2008,[152] and continues to gain momentum among public-health leaders.[153] In addition to individual and synergistic contributions to global-health agendas, national public-health institutes can also increase ownership of countries' research agendas, strengthen stewardship of national information systems, and facilitate repatriation opportunities for scholars studying abroad. As subordinate agencies to ministries of health, however, national public-health institutes might have less influence. Moreover, the COVID-19 pandemic has

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revealed country experiences of governments ignoring, silencing, or scapegoating national public-health institutes when their advice differs from the political perspectives of those in power.

Conclusions

There are multiple, complex, and inter-related national-level and subnational-level drivers of intersections and realised (or unrealised) synergies in policy and programme decision making and implementation for universal health coverage, health security, and health promotion. These factors can be clustered into four broad themes of actor agency, power, self interest, implicit and explicit values, and ideology; context; decision-making processes for formulation and implementing policies and programmes related to universal health coverage, health promotion, and health security; and how health-system structures and building blocks are organised and operated. Countries potentially have the agency and power to better realise synergies at intersections between the three agendas, but this is not always done. Interventions that the Commission observed had been effectively used to better realise synergies at intersections included top-down approaches such as legislation and policy instruments, bottom-up approaches such as partnerships with other sectors (ie, public and private), community and civil society mobilisation, and advocacy. Although sector-wide approaches are no longer as popular as they were in the 2000s, our case studies suggest that they do have the potential to support better realisation of synergies at intersections in LICs, which remain highly dependent on external funders.

Synergies and fragmentation at the global level and within HICs

This section presents findings related to the Commission's research questions: what multilateral efforts have promoted synergies at agenda intersections; and how do the approaches of countries that provide development assistance for health foster synergies or fragmentation at intersections?

The problems of missed synergies at intersections are not only felt in LMICs, but also among global actors, and within the health systems of HICs. Our findings come from exploring the causes of missed synergies and fragmentation at the global level and multilateral efforts to promote synergies, including two case studies: the Global Fund to Fight Aids, Tuberculosis and Malaria (GFATM) and the International Health Partnership Plus (IHPP). These examples show that efforts to promote synergies among multiple actors have not created better synergies between the three agendas. We then summarise our observations from the four HIC case studies, Germany, Japan, the UK, and the USA, which illustrates three key points: many HICs have substantial problems of fragmentation within their health systems; that there are considerable differences in the agendas and priorities between different HICs—including those relating to universal health coverage, health security, and health promotion; and that fragmentation within and between HICs has implications for their roles as providers of development assistance for health. Understanding global synergies is important: new and unanticipated global health problems such as the COVID-19 pandemic increase the need to adopt more synergistic and collective approaches across countries, rather than countries embracing nationalistic and self-interested approaches to health security. Before we explore the causes of fragmentation, it is helpful to trace the origins and trends in the three focal agendas.

Causes of fragmentation at the global level

We identified five factors associated with fragmentation at the global level: proliferation of global health actors; problems of global leadership; divergent interests; problems of accountability; and problems of power relations. Spicer and colleagues explore these issues in detail.[154]

Proliferation of global-health actors

There has been a substantial growth in the number and types of global actors funding, managing, and implementing health programmes; Hoffman and Cole suggested there were 203 in 2018, up from around 150 in the late 1990s.[155] One of our interviewees said: "we're getting a lot of fragmentation and it's getting worse as you get new entrants into the global health marketplace and there's no overall plan or cohesion". Global-health actors include WHO, UNICEF, and the World Bank. The UN system is expanding. For example, UNAIDS was created in 1994, and the Independent Panel for Pandemic Preparedness and Response, established in 2020, recommended a new Global Health Threats Council at the level of Heads of State and Government.[156,157] Bilateral agencies are also growing in numbers: 29 bilateral agencies from HICs are listed by the Organisation for Economic Cooperation and Development Development Assistance Committee.[158] So-called south–south cooperation is also expanding: the global influence of the five supposedly emerging economies of Brazil, China, India, Russia, and South Africa is increasing because of their growing contributions to global-health financing and as influencers of global institutions and agendas.[159] China is increasing its involvement in global health by engaging in multilateral institutions, contributing financially, and establishing a bilateral agency: the China International Development Cooperation Agency.[160]

There are many intergovernmental organisations working on health issues, including the African Union, the Caribbean Community, and the EU, and research and knowledge-generation actors including universities, consultancies, and think tanks (policy research and advocacy institutes). Vast numbers of civil-society

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organisations are involved in global health; possibly as many as 37 000 in 2000.[161] Fidler[162] uses the term open source anarchy to describe the numerous uncoordinated civil-society organisations' and their increasing influence on global health.[163] The Gates Foundation, and other philanthropic foundations, are very important to global health, as are transnational pharmaceutical corporations, and other private-sector actors.[164] Furthermore, since the late 1990s, multiple global-health partnerships and initiatives have been launched, including the GFATM, Gavi, the Vaccine Alliance, and the US President's Emergency Plan for AIDS Relief (PEPFAR). HICs often maintain bilateral HIV/AIDS programmes while funding GFATM, which increases the number of parallel funding channels, and therefore the complexity of the global health system.[165]

Increased complexity in the global health system makes synergistic working more difficult, as an interviewee explained: "I think just part of it is it's far too complicated". Different global-health actors have different priorities and agendas, including universal health coverage, health security, and health promotion; different interests; adopt different financing instruments; and follow different regulations, cultures, and processes, making harmonisation of global-health efforts difficult. These priorities are commonly imposed on and not aligned with LMICs, thereby burdening the health systems of those countries as they attempt to manage multiple, uncoordinated global actors' health programmes.[155,164,166–169]

Problems of global leadership

A second cause of fragmentation relates to problems of effective global-health leadership. WHO's mandate is to coordinate global health and lead on regulation and standard setting; its constitution states that "the functions of the Organization shall be [...] to act as the directing and co-ordinating authority on international health work".[170] However, there are challenges for WHO in fulfilling its role. First is the proliferation of global-health actors; coordinating them all is difficult:[164] "the WHO stands on a crowded stage; though once seen as the sole authority on global health, the WHO is now surrounded by many diverse actors".[167] Second, UNICEF, the World Bank, and other actors have challenged WHO's leadership. The World Development Report Investing in Health is often linked to the World Bank's ascendancy in global health, which opposed the universal health coverage-focused agenda embodied in WHO's health for all policies and programmes. The Gates Foundation is also very important; an interviewee said: "the global agenda is [...] extremely heavily influenced and shaped by the foundation".

Third, WHO is sometimes criticised for having internal organisational problems; an interviewee stated: "WHO can't [...] have a concerted action within its [...] six regional offices and its headquarters". Fourth, WHO has inadequate resources to meet its obligations, and there is pressure from its donors who have different agendas and priorities and considerable control over its activities through making voluntary contributions, which are often designated for donor-defined purposes.[171,172] Finally, some HICs see strong multilateral organisations as threatening their national sovereignty, and their ability to pursue their own interests. An interviewee said: "They [some HICs] are usually trying to undermine the global health architecture [...] because they're afraid of conceding sovereignty. I mean they want to assert influence, but it's better the whole thing [the global health system] is weak rather than strong". This perspective varies substantially between HICs; most EU countries are supportive of strong global architecture and WHO's universal health coverage agenda, contrasting with the USA. This issue resurfaced with the Trump administration's threat to withhold donations and withdraw from WHO amid the COVID-19 pandemic in 2020, although in the early days of President Biden's administration his predecessor's decision was retracted.

Divergent self interests

A third cause of fragmentation relates to the self interests of the countries providing development assistance for health; even if well meaning, they commonly adopt their own priorities and approaches that do not necessarily align with the countries receiving development assistance for health, and their divergent interests can mean that harmonisation is difficult. Of course, countries wishing to further their own interests is not new: colonial powers, while presenting their activities as altruistic, have historically been self serving. Nowadays, although some donor countries adopt more altruistic interests, with a genuine aim of improving health equity or providing relief for people in LMICs,[173–176] much international cooperation is heavily driven by donor countries' interests—although this is often not acknowledged.[175,177] Gulrajani[178] explains that "bilateral donor interests appear to skew the aid allocation process in favour of strategic and political considerations, as opposed to country need or potential for development impact".

The health security agenda, often, although not always, serves countries' interests by protecting their citizens and economic interests; as an interviewee said: "[... development assistance for health is] driven by, to some extent, by your interest to protect your own nation, your own interests [...] to kind of protect yourself from threats that might transmit across borders". Indeed, some HICs, MICs, and LICs appeared to emphasise the health-security agenda above universal health coverage in response to COVID-19 as they sought to protect their populations and economies from the spread of the virus across national borders. COVID-19 entrenched nationalist self interests in some European countries as they sought to secure vaccine stocks—a phenomenon known as vaccine nationalism.[179] The problem lies in a lack of acknowledgement that global solidarity, rather than vaccine nationalism, will be essential

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long term in tackling the pandemic—which in turn will serve national self interests. A statement from the Mo Ibrahim Foundation[180] captured this: "ensuring equitable and balanced access to vaccines is a matter of global security and shared interest. If the virus is not defeated everywhere, it will continue to spread and mutate."

Global-health funding can serve donor countries' foreign policy interests by boosting countries' reputations and diplomatic relations with, and influence over, countries receiving development assistance for health—sometimes also known as soft power.[174,176] An interviewee remarked: "Hillary Clinton when she was Secretary of State [...] coined the term 'smart diplomacy'. Which is basically you do good to be liked and to get more... influence". This behaviour is not unique to HICs; such approaches are embraced by other powerful countries with donor programmes such as China and Russia. Commentators suggest that both countries are using vaccine diplomacy to gain international influence.[181]

Donor countries' economic interests are also served by global-health activities, which can expand markets in LMICs for donor countries' products and services.[173,174] Global-health funding in LMICs is sometimes linked to developing a healthy workforce, as an interviewee captured: "[... HIV and AIDS were] affecting [...] the big companies [...] because the workers were dying because of HIV/AIDS. And the economic consequences, which were becoming serious".

The extent to which self interests are emphasised varies; some donor agencies provide mostly tied aid (ie, aid money that must be used to purchase goods and services from the donor country), whereas others have limited this approach. For example, the UK's International Development Act banned tied aid, although the amalgamation of the Department for International Development and the Foreign and Commonwealth Office into the Foreign, Commonwealth and Development Office in 2020, coupled with reductions in overseas development-assistance budgets in 2021, suggests that the UK's global health work might return to a more overtly self interested stance.[182]

Problems of accountability

A fourth cause of fragmentation relates to global health actors' weak accountability to LMIC governments and populations and stronger accountability to donor governments and taxpayers. These actors are often expected to produce rapid results attributable to their efforts. Bilateral funding and short-term, vertical projects are commonly preferred over health systems strengthening with unclear shorter term outcomes but with the potential to improve universal health coverage in the longer term.[183] Health issues that receive large amounts of media attention often dominate,[168] for example HIV/AIDS; malaria; tuberculosis; and maternal, newborn, and child health; and global funding is skewed towards these issues. An interviewee said: "the whole need to be able to communicate your effectiveness to taxpayers or stakeholders so that you can justify your [...] tax dollars being spent on aid [...] there's definitely that kind of verticalization around thematic issues". Indeed, the considerable funding since the early 2000s for HIV/AIDS programmes in LMICs is sometimes seen as a reflection of health-security concerns within HICs, rather than altruistic concerns about the populations of LMICs. This requirement of country governments contributing development assistance for health often makes harmonisation unattractive: actors are required to attribute results to their own efforts, rather than collective efforts, and tend not to be transparent with each other and with LMICs.

Some commentators suggest that non-state actors, including foundations and other civil society organisations, businesses, experts, and journalists, have particularly unclear lines of accountability.[184] Furthermore, a cause of fragmentation can be clashes of ideas and values between individual leaders, including powerful philanthropists who have little accountability.[162,174,185]

Problems of power relations

Another cause of fragmentation stems from global health maintaining unequal power relations between the countries providing and receiving development assistance for health by holding back or even damaging the economies of countries receiving development assistance for health while serving the interests of countries providing development assistance for health. Increasingly, commentators advocating for a more decolonised aid sector point to how HIC-dominated global-health institutions and research undertaken by universities from HICs on health issues within LMICs reflects and can reinforce unequal power relations between countries. Because colonising enterprises were always more about colonial powers' economic and political interests than benefitting the countries being colonised, global-health institutions and development assistance for health are often criticised for not really being altruistic at all—instead, they have colonial self interests at their core. For example, aid can undermine LMIC's businesses, reinforce dependency, and fail to strengthen national institutions and systems.[186] Aid sometimes supports corrupt and non-democratically elected leaders.[175,187–190] Aid dependency can cause fragmentation as countries receiving development assistance for health are in a weak negotiating position for fear of losing funding and might have to follow donors' interests and priorities—such as health security—rather than requiring donors to align with their own priorities and systems, which might reflect universal health coverage principles.[177,191] An interviewee explained: "they [donors] play with money [...] If there's something that doesn't go according to what they thought, then the pressure through money is used." Assumptions about corruption within LMICs, whether accurate or not, justifies top-down approaches that reinforce

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Panel 1: **Categorisation of global efforts related to intersections and synergies**

We categorise these efforts as follows:
- Efforts to foster improved synergies: declarations, agreements, and partnerships aiming to foster more synergised approaches and other principles of development effectiveness, for example the Paris Declaration on Aid Effectiveness
- Declarations, commitments, and targets: multiple actors collectively agreeing to common principles, norms, goals, targets, and regulations, for example the Sustainable Development Goals
- Global health initiatives: multi-actor partnerships for raising finances, product donation, and coordinating and implementing disease-control programmes in multiple countries, for example the Global Fund to Fight Aids, Tuberculosis and Malaria
- Product and technology development networks and partnerships: multi-actor product-development partnerships and developing new drugs and other health-related products and technologies, for example the International Partnership for Microbicides
- Evidence and knowledge networks and partnerships: multiple actors working together to generate information, knowledge, and evidence and develop methods and metrics, for example the Health Metrics Network
- Technical and influence networks and partnerships: multiple actors working collectively to harness technical resources, promote advocacy, raise awareness, and work synergistically towards health goals, for example the Global Outbreak and Alert Network

fragmentation, including introducing parallel systems, funding civil-society implementers, and avoiding budget-support approaches and sector-support approaches.

The extent to which unequal power relations exist varies. The lowest-income states tend to have weaker health systems than wealthier states and sometimes high levels of corruption and a limited ability to influence donors' priorities and coordinate the activities of multiple donors. However, some LICs successfully coordinate multiple donor programmes despite receiving substantial development assistance for health. Ethiopia and Rwanda are good examples. Key factors in those countries are strong leadership and robust country-health strategies. An interviewee said about Ethiopia: "If you get the leadership and consistency in policy application then you can minimise most of the damage caused by the global actors".

Multilateral efforts to promote synergies at the global level

There have been many global efforts embracing synergistic approaches or aiming to foster synergies. In this section, we reflect on success and challenges in promoting synergies. We also map key global efforts, using previous attempts to map coordination efforts,[183,192] and carrying out web searches to identify additional efforts. We then weigh up the successes and challenges of two high-profile efforts: the GFATM and IHPP.

Mapping multilateral efforts to promote synergies

More than 100 efforts embracing synergistic working or aiming to promote synergies are presented in panel 1.

The large number of efforts suggest that global-health actors are, in principle, willing to work synergistically. Indeed, some efforts have galvanised commitments to common global priorities, not least the SDGs, the Global Action Plan for Healthy Lives, and Well-Being for All, and there were calls in 2021 for an international treaty for pandemic preparedness and prevention, which is noteworthy in that it would be legal binding.[193] Speaking about the Global Action Plan, an interviewee suggested: "it's definitely going in the right direction [...] for everyone, a big step forward". Among these efforts, the SDGs are clearly of great importance, although it might be argued that health priorities continue to be based on the MDGs for now—including those relating to the agendas of universal health coverage, health security, and health promotion. Nevertheless, the shift from the MDGs to the SDGs has been welcomed since the SDGs have more potential to foster better synergies. The SDGs embraced a participatory and collaborative approach to developing goals and targets and included the 193 member states, scientists, the private sector, and civil society, and held face-to-face and web-based consultations with millions of citizens, in contrast with the top-down approach of the MDGs. The SDGs are expected to be nationally owned and country-led rather than imposed; each country should establish their own national framework to achieve the SDGs. Moreover, whereas the MDGs focused on actions within LMICs, the SDGs appeal to all countries to take action. The SDGs also promote economic development in LMICs, enabling them to generate their own revenue to achieve the goals and adopt a holistic, multisectoral approach to poverty reduction by connecting social inclusion, economic growth, and environmental protection together with equity, human rights, and non-discrimination. The goals are hoped to be mutually synergistic rather than in competition with one another; SDG 17 Partnerships for the Goals specifically emphasises collaboration across impact areas and among actors. Finally, the SDGs emphasise monitoring, evaluation, and accountability, unlike the MDGs. Better accountability is promoted through establishing time-bound and measurable objectives and generating high-quality data relevant to national contexts.

The cumulative effect of multiple efforts has contributed to synergies: "[...] all of these initiatives have probably laid down the baseline work [...] on which the [Global] Action Plan is built. So, it's not like they started

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off [with nothing]". However, although these efforts have raised awareness about fragmentation and the benefits of synergies, improvements at global or national levels have not been particularly tangible and sustainable. For example, although the IHPP kept issues of aid effectiveness on the global health agenda, it had less success in sustainably changing the behaviours of participating global-health actors and country governments.

Multiple problems limit the success of these efforts. The first issue is the proliferation of these problems, which further complicates the global-health architecture. There are particularly substantial numbers of global-health initiatives that are often criticised for reinforcing vertical approaches, introducing parallel systems and processes within LMICs, and duplicating bilateral channels.[165,168,194,195] Moreover, global health is in constant flux; new agendas and ideas are regularly introduced. Global-health actors are incentivised to introduce new initiatives, rather than building on existing efforts. Competition for attention and resources seems inevitable. An interviewee said: "If you take the Busan outcome [...] immediately you see [other] initiatives popping up [...] So, that's the problem [...] the same players who signed up to the [Busan] Declaration don't follow what they signed up to [...] the following year they are doing something else". Here, the interviewee was referring to the Busan Partnership for Effective Development Cooperation, which was an agreement made by participating countries and global actors at the 2011 Fourth High-Level Forum on Aid Effectiveness to improve various aspects of aid effectiveness. Hence, many efforts are ephemeral, making it difficult for them to mature and yield results.[183]

A second problem is the voluntary, non-binding nature of most efforts, with weak or no accountability mechanisms for detecting impacts and imposing sanctions in the event of failure to honour commitments. To be effective, efforts would need stronger accountability mechanisms. As an interviewee stated: "how do you build accountability [...] so that people feel that they need to do something?" Exceptions are the Framework Convention for Tobacco Control (2003)[196] and the International Health Regulations (2005), which are legally binding,[2] although even these efforts must be ratified in sovereign-country law before implementation. A third problem is that there are few resources to implement global efforts. As an interviewee clarified: "the Paris Declaration [on climate change...] was not followed by a continuous provision of resources for the countries to implement their own programmes [...] that is the major deficiency". Here the interviewee was referring to the Paris Declaration on Aid Effectiveness of 2005, whereby multiple countries and global actors agreed to the importance of a number of aid effectiveness principles.

Ultimately, these global efforts have had minimal effects on the causes of fragmentation. To meaningfully improve synergies, global actors would need to fundamentally change their behaviours. To date there have been no global efforts introduced that have triggered this behaviour change.

Case study: the GFATM

The GFATM is perhaps the best-known example of global cooperation in health and is clearly pre-eminent in its scale, ambition, and longevity. And yet, the origins and evolution of this organisation reveal faults in at least two of the three agendas. In terms of financial volume, the GFATM is the biggest multilateral global health initiative. It raises and distributes about US$3 billion per year, which is nearly 10% of all development assistance for health. GFATM promotes synergies because the organisation is largely country driven: it supports recipient countries' plans and does not allow its donors to designate how their contributions will be used. The organisation also supports universal health coverage by funding health-care delivery; global health security by supporting control efforts for three important infectious diseases (ie, HIV/AIDS, tuberculosis, and malaria); and health promotion by supporting efforts to curb new infections, both population-wide and individual.

However, because of its focus on three diseases, the GFATM is often cited as a classic example of fragmentation between the universal health coverage and health security agendas. To understand this belief, we need to explore its origins. The ideas behind creating the GFATM have many roots, one being the 2000 G8 Summit. Although the official communication of the Summit[197] focused on the three diseases, it also mentioned the "development of equitable and effective health systems"[197]—and, therefore, we find alignment with the principles of universal health coverage. Another root was the US Global AIDS and Tuberculosis Relief Act of 2000, which intended "to provide for negotiations for the creation of a trust fund to be administered by the [World Bank] to combat the AIDS epidemic".[198] The 2001 Declaration of Commitment on HIV/AIDS, adopted by the UN General Assembly Special Session, established a Global AIDS and Health Fund, instigating disagreements between proponents of an HIV/AIDS-specific fund and proponents of a broader health fund. Those favouring broader health funds argued that singling out three specific infectious diseases made no sense, as the root cause was the weak health systems in most LMICs. Those favouring a disease-specific fund adopted an orientation closer to the health security agenda by arguing that an exceptional effort was required due to the global impact of the three diseases. By the end of 2001, disagreements were by and large resolved, and the GFATM was born.

The underlying tension, however, never disappeared. The GFATM soon realised that it could not fight three diseases without stronger health systems within the LMICs receiving its support and, therefore, the fifth funding round accepted health systems-strengthening proposals.[199] Meanwhile, the World Bank

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recommended, in a comparative study of the GFATM and itself, that the GFATM focus on disease-specific interventions and left health systems strengthening to the World Bank.[200] Although the Global AIDS Alliance and Health Global Access Project, supported by more than 30 experts and 300 civil society organisations, urged the GFATM to keep a specific funding window for health systems strengthening, the GFATM's then Executive Director, Richard Feachem, accepted that the GFATM would focus on rapid scale up of disease-specific programmes and the World Bank would be responsible for the long-term development of health infrastructure.[201]

In 2008, WHO launched the Maximizing Positive Synergies Between Health Systems and Global Health Initiatives study, which acknowledged "that the impact of global health initiatives on health outcomes and health systems, though variable, has been positive on balance and has helped to draw attention to deficiencies in health systems", but also "endorse[d] the need to: i) Infuse the health systems strengthening agenda with the sense of ambition, the scale, the speed, and the increased resources that have characterized the [global health initiatives]".[195] Meanwhile, the Task Force for Innovative International Financing for Health Systems published its final report, recommending "a health systems funding platform for the Global Fund, GAVI Alliance, the World Bank and others".[202] Notwithstanding positive reactions, the suggested health-systems funding platform never became a reality.[202]

In 2011, reports about corruption within the GFATM led to the suspension of funding from countries including Belgium, Germany, Sweden, and Ireland.[203] The then Executive Director, Michel Kazatchkine, stepped down and was replaced by the US Global AIDS Coordinator, Mark Dybul, from 2006 to 2009. If Steurs and colleagues[204] are right about "EU donors having a love-hate relationship with the Global Fund because of its narrow [disease-specific] mandate", this episode in the GFATM's history could have resulted in the EU decreasing its interest in and support for the GFATM. The GFATM's New Funding Model,[205] its Development Continuum Working Group (founded in 2014),[206] and its Investing in Resilient and Sustainable Systems for Health[207] were all launched while this tension was occurring. Both sides of the argument—those advocating a disease-specific fund and those pushing for a health systems strengthening approach—might have a point: specific diseases cannot be addressed in isolation from the context in which they thrive; however, as long as financial support to the GFATM is justified in the USA as a health-security effort that "helps keep Americans safe and benefits our diplomatic and trade relationships", and as "an investment in US security, and in countries that are critical markets for US exports",[208] expanding the GFATM's mandate risks reduced US support to tackle the three specific infectious diseases.

The GFATM's 2017–2022 strategy shows continuing investments for health systems strengthening, with US$1 billion a year being pledged for areas including maternal and child health, communities, data systems, and supply chains.[207,209,210] This health systems strengthening focus should not only be a way to decrease the aforementioned tensions, but also to move towards a more synergistic approach in infectious-disease prevention and control. As the COVID-19 pandemic highlighted, measures of health security and universal health coverage are intertwined and most likely more sustainable when carried out in an integrated manner in a resilient health system than when isolated from one another.

In the sixth replenishment conference, hosted by President Macron in France in 2019, donors showed incredible support for the GFATM in pledging an unprecedented US$14·02 billion.[211] The UK, France, and Germany, and the EU itself increased their contributions by 16–20%, thereby debunking initial concerns of dwindling support for the GFATM, while the USA maintained a constant $1·56 billion per year.[211] Since 2007, the EU's contributions have been continuously rising, making it the sixth largest donor, with approximately 5% of all contributions.[212] Moreover, the GFATM is receiving additional support from EU member states separately, therefore adding up to over 50% of the total pledge.[213]

Case study: the IHPP

The IHPP was presented as a substantial effort to promote synergies and, later in its evolution, it explicitly embraced the universal health-coverage agenda.[214] Launched in 2007, the IHPP aimed to apply the Paris Declaration of Aid Effectiveness to the health sector, and to accelerate progress towards the health-related MDGs. 26 bilateral and multilateral agencies, LMIC governments, global-health initiatives, and the Gates Foundation signed a global compact committing to five principles: country ownership, alignment, harmonisation, mutual accountability, and managing for results. Subsequently, other global actors joined and, with several governments, signed country compacts committing them to actions within those countries. The initiative encouraged signatories to increase support for a single national strategy within participating countries and promoted global health actors' alignment with country systems, through joint financial management assessments, Joint Fiduciary Arrangements, and common monitoring frameworks.[183,214–216]

The IHPP initiative embraced synergies in several ways. Since 2013, the IHPP has been governed by a steering committee including senior government officials from partner countries, thereby giving LMICs a voice in steering the partnership. The IHPP worked across the health sector rather than on specific health priorities and involved partners from multiple sectors.[214] Transparency and accountability were enhanced by commissioning independent monitoring known as IHP+ Results,[215] which

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prompted participating actors to act.[183,214] In 2014 the Global Reference List of Core Indicators was created to consolidate the vast numbers of indicators required by different donors, thereby reducing the burden on LMICs.

IHP+ Results revealed progress among some participating countries and global-health actors towards fulfilling their IHPP commitments. Countries established national-health strategies and mutual-accountability mechanisms that global-health actors engaged in. Some global-health actors moved towards longer-term programme support and alignment with national priorities, strategies, and systems. The proportion of health financing reported on national budgets increased, as did some donors' use of national public-sector financial-management systems.[183,214,217,218] There were also limits to the initiative's achievements: the IHPP tended to be viewed as a top-down initiative, contradicting its country-led ethos, which slowed progress in its early years;[215,219] limited financing existed for implementation and non-binding compacts made it difficult to hold participants to account. Therefore, new behaviours were not formally institutionalised within global-health actors' mandates and performance criteria, meaning changes were incremental and unsustainable.[214] Some donor agencies remained reluctant to channel funds through public-sector financing systems and use country-procurement systems. Although most countries developed joint performance-monitoring systems and frameworks, most donors required countries to use their own indicators in parallel. Civil society participation in decision making remained minimal in extent or absent in many participating countries.[183,217,218] The IHPP also struggled to remain relevant as new global agendas side-lined aid effectiveness.[220] An interviewee summarised: "soon after the establishment of the IHP the tide turned totally and fragmentation increased and lack of coordination, lack of alignment increased [...] it's incredibly difficult to say what was the effect of [the IHPP...] possibly it would have been even worse if [the IHPP] had not been there".

The IHPP proved to be remarkably sustainable. It was rebranded in 2016 as Universal Health Coverage 2030 (UHC2030), thereby emphasising the universal health coverage agenda of the SDGs. The initiative expanded: by 2016 there were 66, signatories including 37 partner countries.[221] UHC2030 involved governments, private sector, civil society, international organisations, and academia signing a global compact committing them to collaborate on accelerating progress towards universal health coverage through strengthening country health systems. The compact aimed to sustain momentum around universal health coverage and collective action, specifically in relation to the UHC Key Asks: (1) ensure political leadership beyond health; (2) leave no one behind; (3) regulate and legislate; (4) uphold quality of care; (5) invest more, invest better; (6) move together; (7) and gender equality.[222]

Synergies and fragmentation in HIC global-health programmes

This section compares four HICs: Germany, Japan, the UK, and the USA. We look at how these countries' approaches to global health foster synergies and create fragmentation. We describe national strategic leadership for global health and look at how development assistance for health contributions are channelled and to what—including efforts relating to the three agendas. We then highlight the country actors' coordination mechanisms relevant to global health. Finally, we review these countries' foreign-policy efforts to tackle COVID-19. Our analysis shows how these HICs differ substantially, and hence it is important to avoid generalisations about HICs' global-health activities. We focus on these four countries' health policies and systems related to their global-health efforts (rather than their domestic health policies and systems), which is a limitation in our analysis. Our analysis illustrates that all countries, including HICs, struggle in their different ways with ideas, ideologies, priorities, processes, and systems that increase fragmentation and also increase synergies—with effects on their responses to COVID-19.

National political leadership and global-health strategies

If a country's national leader has a clear vision on global health and there is a clear, overarching national strategy guiding global health work, we assume this will promote better synergies. Japanese and German leaders have pushed for more multilateral approaches and have aimed to increase their countries' influence on global health agendas. Since 2016, the former German Chancellor, Angela Merkel has increased the visibility of health on the G7 and G20 agendas and was a joint architect of the Global Action Plan for Healthy Lives and Well-Being for All initiative.[223] Angela Merkel responded strongly to the 2015 Ebola outbreak, reflecting and reinforcing health security as central to Germany's global-health agenda. When in office, the Japanese Prime Minister Abe Shinzō pressed for Japan's engagement in and influence on global health, and highlighted universal health coverage as a global priority captured in the slogan Leave No One's Health Behind and Japan's engagement in global-health diplomacy.[224,225] During Abe Shinzō's time as prime minister, Japan hosted multiple high-level global health forums and, in 2015, the Ministry of Health released the document Japan Vision: Health Care 2035, signalling Japan's intention to become a global-health leader.[226,227] Subsequently, Prime Minister Suga Yoshihide focused on multilateralism, vaccine development, and universal health coverage in the COVID-19 response—including equitable access to vaccines in LMICs.[228]

For **UHC2030** see https://www.uhc2030.org

Political leadership for global health was not particularly visible from the UK Prime Minister Boris Johnson, partly due to political attention on Brexit and COVID-19, although by late 2020 and early 2021 his position became clearer: he pushed for reductions in the UK's overseas

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development assistance and merged the Department for International Development and the Foreign and Commonwealth Office to become the Foreign, Commonwealth and Development Office. Johnson also advocated for improving spending efficiency and ensuring aid serves the UK's economic and possibly health security-related interests. Johnson advocated for more multilateral thinking on the distribution of COVID-19 vaccines in 2021, hosted GAVI's replenishment, and presented a 5-point Plan for pandemics at his speech at the 2020 UN General Assembly.[229] The UK's G7 presidency in 2021 put global health, especially pandemic prevention and preparedness, more prominently on the G7 agenda; leaders signed a declaration to commit to these principles known as the Carbis Bay Declaration, published July 12, 2021.[230] US leaders have tended to be driven by infectious disease outbreaks and, therefore, health-security principles in global health. The US President Bush launched PEPFAR in 2003, signalling US commitment to tackling infectious diseases, a commitment continued by Barack Obama during his presidency. Donald Trump did not make specific global-health commitments, although he highlighted preventing disease outbreaks in the 2017 National Security Strategy,[231] and his controversial rhetoric on multilateralism as betraying America's national interest was widely reported on. The Biden administration's global-health strategy had much more global engagement for health, including restoring WHO funding and membership, rescinding the Mexico City Policy on abortion, and restoring UNFPA funding. In 2021 and 2022, the focus of the global health strategy was health security, and specifically the global COVID-19 response, involving supporting the Access to COVID-19 Tools Accelerator and joining the COVAX Facility.[232]

	Strategy	Strategy priorities
Germany[233]	Global health strategy of the German Federal Government: responsibility–innovation–partnership: shaping global health together (2020)	Promote health and disease prevention; take action to reduce the health effects of climate change; strengthen health systems and facilitate the provision of universal health coverage without discrimination; safeguard public health, through health security and the provision of medical assistance in humanitarian contexts; foster global health research and innovation
Japan[234]	Basic design for peace and health (2015)	Building a resilient health system and establishing health security; contributing to quality growth and poverty eradication through assistance in the health sector; achieving universal health coverage that will leave no one behind
UK[232]	Global health strategy 2014 to 2019 protecting and improving the nation's health (2014)	Improving global health security; responding to outbreaks and incidents of international concern; public-health capacity building; strengthening approach to international aspects of health and wellbeing, and noncommunicable diseases; strengthening UK partnerships for global health activity
USA[235–237]		
Strategy one	The global strategy of the US Department of Health and Human Services (2016)	Global action to protect and promote the health and wellbeing of Americans; provision of international leadership and technical expertise in science, policy, programmes, and practice to improve global health and wellbeing; global action to work with interagency partners and to advance US interests in international diplomacy, development, and security
Strategy two	CDC global health strategy 2019–21	Health impact: save lives, improve health outcomes, and foster healthy populations globally; health security: protect Americans and populations across the globe by strengthening global public-health prevention, detection, and response; public health science leadership: lead and influence the advancement of global public health science and practice
Strategy three	United States Agency for International Development's Global Health Strategic Framework: better health for development	Provide technical leadership in responding to new global-health challenges; partner strategically with a wide range of actors; accelerate the development and application of innovation, science, and technology; scale up evidence-based, equitable, inclusive, and locally adapted health solutions; strengthening local health-system capacity to support partner countries' leadership of health policies, strategies, and actions; promote inclusion, gender equality, and female empowerment; work efficiently and be effective stewards of public trust and resources

Table 2: **National global health strategies**

Germany, Japan, and the UK each have a single national strategy for global health (table 2). Germany and Japan have cross-governmental strategies, and the UK's strategy is published by its national public-health institute, at the time known as Public Health England, that reports to a single ministry—the Department of Health and Social Care.[238] Although the USA has no single, government-wide global-health policy, key government agencies including USAID, the Department of Health and Human Services, and the Centers for Disease Control and Prevention each produce global health strategies (table 2). The emphasis of the four HICs' strategies towards the three agendas varies. The German, Japanese, and UK strategies list health systems strengthening, population development, and poverty eradication-related objectives. German and Japanese strategies reference universal health coverage, while the UK's strategy is the only one listing non-communicable diseases. Japan's strategy embraces health security and universal health coverage. The UK and US strategies refer to fostering international partnerships, while Germany's strategy mentions strengthening international institutions, especially WHO, and policy coherence by fostering coordination between ministries and departments. All countries' strategies acknowledge that global-health efforts benefit their national interests and place substantial attention on infectious-disease control across international borders. The UK links its strategy to national security and prosperity and US global-health engagement tends to be framed as a moral imperative and a means to further economic interests and bolster national security.

Funding channels

We assume that HICs channelling development assistance for health through multilateral institutions embody a more synergised approach than bilateral funding, and that channelling funding through sector-

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wide approaches and to health systems-strengthening activities in LMICs reflects more synergistic thinking than vertical programmes. The proportion of development assistance for health directed through bilateral and multilateral channels varies between the four HICs we studied. Of these countries, Japan emphasises multilateral development assistance for health the most; in 2019, 56·3% of its development assistance for health went to multilateral organisations, particularly GFATM, GAVI, UNFPA, and the World Bank (55·6%).[239] In 2019, Germany committed 47·9% of its development assistance for health to multilateral organisations, particularly GFATM, European Union institutions, GAVI, and the World Bank (34·2%),[240] while 31·3% of the UK's development assistance for health was spent on bilateral programs in 2019.[241] Of the UK's multilateral development assistance for health contributions, nearly 31% went to GAVI, GFATM, the World Bank's International Development Association, and the European Commission. The US committed 57·5% of its development assistance for health to support bilateral programmes, with most multilateral funding going to 122 countries and GFATM.[242]

Each HIC supports different health priorities through their development assistance for health contributions. Germany and Japan allocate substantial resources to health systems-strengthening programmes in LMICs. Germany committed 22% and Japan committed 16% of development assistance for health to health system strengthening in 2019.[239] The UK and the USA tend to emphasise vertical-health programmes; 47% of the UK's development assistance for health went on maternal and child health programmes, and only 4·8% to sector-wide approaches or health systems strengthening work. The USA invested more than 94% of its development assistance for health on infectious-disease programmes, particularly for HIV/AIDS, tuberculosis, and malaria, and maternal and child health. Less than 1% of US investments was channelled through sector-wide approaches or on health systems strengthening in LMICs, although more recent investments have included health systems strengthening-related activities. The IHME GBD data analysis of development assistance for health funding flows from the four HICs has the same results as the global health donor tracker data (figures 5 and 6).[243]

Global-health actors and coordination

The number of actors involved in global health varies between the four HICs we studied (panel 2). We assume that a reduction of country actors responsible for global

***Figure 5:* Flows of global health financing to multi-lateral agencies from Germany, Japan, the UK, and the USA**
Source: Institute for Health Metrics and Evaluation. b=billion. CEPI=Coalition for Epidemic Preparedness Innovations. HSS/SWAps=Health systems strengthening and sector-wide approaches. m=million. NGO=non-governmental organisation.

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health, with clearer, less overlapping roles, promotes synergies. Japan has few state actors engaged in global health, and overlapping responsibilities are minimal. The Ministry of Foreign Affairs leads global health and engages with multilateral organisations, including GFATM, GAVI, UNICEF, and UNFPA, except for WHO and UNAIDS which are managed by the Ministry of Health, Labour and Welfare. Japan's International Cooperation Agency manages overseas development cooperation and largely follows the Ministry of Finance's lead. Japan's Ministry of Finance manages global-health issues with the World Bank and the Asian Development Bank. The UK also has few government departments responsible for global health, and few problems of overlapping responsibilities. The

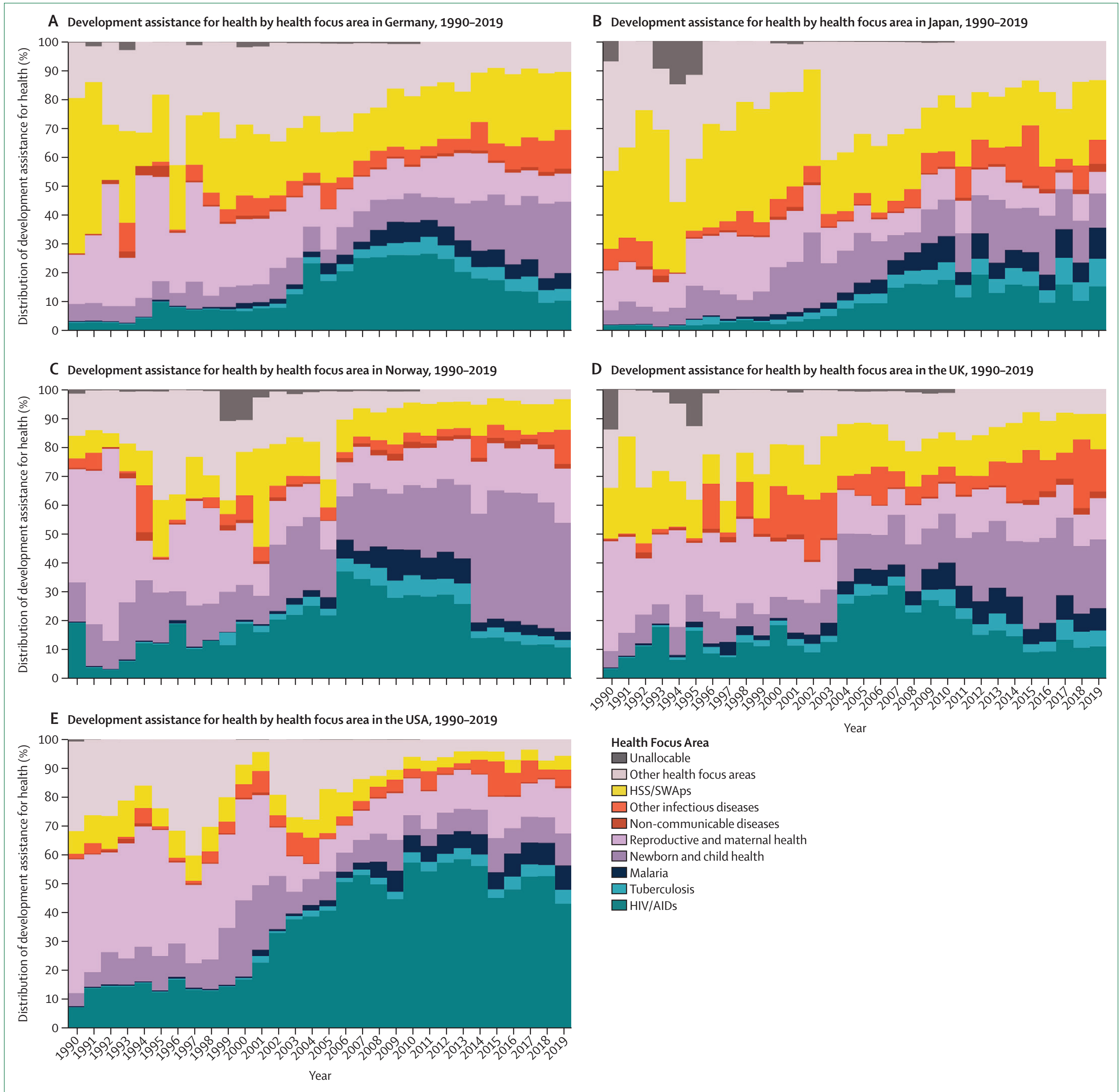

Figure 6: **Health focus area composition for Germany, Japan, Norway, the UK, and the USA**
Source: Institute for Health Metrics and Evaluation. HSS/SWAps=Health systems strengthening and sector-wide approaches.

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Department for Health and Social Care is responsible for domestic-health and global-health programmes, which it implements with a new agency, the UK Health Security Agency: a clear embodiment of the UK's increased health-security interests since the onset of the COVID-19 pandemic, and the Foreign, Commonwealth and Development Office (FCDO). The Department for Health and Social Care is formally responsible for working with WHO and UNAIDS, while the FCDO links to the GFATM, GAVI and UNICEF.[244] The FCDO plays an important role in global health by strategically linking health programmes to development, trade, and security objectives.[245,246]

By comparison, Germany has many state actors engaged in global health. The German Ministry of Health leads Germany's global health work, and links to WHO and UNAIDS; their efforts are supported by Germany's national public-health institute, the Robert Koch Institute.[247] The Ministry of Economic Cooperation and Development coordinates most development assistance for health, with a focus on health systems strengthening.[248] Deutsche Gesellschaft für Internationale Zusammenarbeit usually implements the Ministry of Economic Cooperation and Development's programmes and supports the German Ministry of Health in global health.[249] The German Foreign Office is responsible for humanitarian assistance and has coordinated the Foreign Policy Dimension of Global Health since the 2015 Ebola outbreak. A newer actor in global health, the Ministry for Education and Research strengthens global-research capacities through international networks.[250,251] US global-health activities are particularly complex; there are multiple agencies with overlapping mandates working on global health in over 70 countries. Beyond the White House, agencies include USAID, the Department of State, and the Department of Health and Human Services.[252] USAID focuses on child and maternal health, HIV/AIDS, and other infectious diseases and has country offices in over 100 countries. The Department of State oversees PEPFAR, while the Department of Health and Human Services includes the Centers for Disease Control and Prevention, the National Institutes of Health, the Food and Drug Administration, and the Health Resources and Service Administration, all of which engage in global health.

All examined HICs have coordination mechanisms that bring together multiple political parties and government departments and link state and non-state actors. Effective global health-coordination mechanisms, whether formal or not, can enhance synergies by clarifying responsibilities, promoting trust among actors, and simplifying links to multilateral organisations. There is no formal committee on global health in Germany, although some broader coordination mechanisms engage in global health, such as the Committee on Sustainable Development of State Secretaries, which is the second highest decision-making body after the Cabinet.[253–255] Germany's parliament established an all-party sub-committee on global health at the Bundestag in 2018, which helps to foster synergies between political parties, although less so between different sectors and ministries.[256] Japan has multiple coordination mechanisms at different levels. The Japanese Parliament engages in global health across political parties, with committees on vaccines, neglected tropical diseases, polio, smoking, cancer, maternal and child health, nutrition, and tuberculosis. The Ministry of Foreign Affairs and the Ministry of Health, Labour and Welfare exchange and rotate staff to improve coordination, and officials from these agencies and the Ministry of Finance meet frequently. There are informal committees and working groups including the Executive Committee on Global Health and Human Security, which regularly hosts meetings among governmental and private-sector actors, civil society, and academics.[257]

The UK has multiple coordination and stakeholder-engagement mechanisms. The All-Party Parliamentary Group on Global Health informally works towards cross-party consensus, and aims to bring together academic, governmental, commercial, and civil-society actors to promote the UK's global-health leadership.[258] The Global

Panel 2: Main state actors with responsibility for global health

Germany
- Ministry of Health: Bundesministerium für Gesundheit
- Ministry of Economic Cooperation and Development: Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung
- Robert Koch Institute
- Deutsche Gesellschaft für Internationale Zusammenarbeit
- German Foreign Office: Auswärtiges Amt
- Ministry for Education and Research: Bundesministerium für Bildung und Forschung

Japan
- Ministry of Foreign Affairs
- Ministry of Health, Labour and Welfare
- Ministry of Finance

UK
- Department of Health and Social Care
- Public Health England*
- Foreign, Commonwealth and Development Office

USA
- White House
- United States Agency for International Development
- Department of State
- Department of Health and Human Services
- Centers for Disease Control and Prevention
- National Institutes of Health
- Food and Drug Administration
- Health Resources and Service Administration

*The UK's Public Health England agency was disbanded in 2021 to form a new agency, the National Institute for Health Protection.

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Health Oversight Group oversees global-health policy and programmes, and the Global Health Committee provides guidance on global health and includes the Department of Health and Social Care; the Foreign, Commonwealth and Development Office and the Commonwealth Secretariat; the All-Party Parliamentary Group on Global Health; the Association of Directors of Public Health; UK research councils; the Disasters Emergency Committee; and academia.[259,260] The USA has no permanent interagency committee for global health, although informal coordination mechanisms do exist, and coordination between agencies tends to be ad hoc. For example, USAID cooperates with the Department of Defence and has a Joint Strategic Plan with the Department of State, and the White House National Security Council coordinates ad-hoc interagency meetings on global health.

Foreign policy efforts in response to COVID-19

Embracing synergised efforts in national and foreign-policy responses to COVID-19 is assumed to be a strong indicator of countries' synergised approaches more broadly.

Contrary to the aims of its own global-health strategy, Germany's global COVID-19 response started with export bans for protective medical supplies within the EU to avoid domestic shortages.[261] To counteract this, Germany's federal President, Frank-Walter Steinmeier, with the heads of state of Jordan (King Abdullah II), Singapore (President Halima Yacob), Ethiopia (President Sahle-Work Zewde), and Ecuador (President Lenin Moreno Garcés) proposed an alliance for global public goods to ensure access to COVID-19 diagnostics, therapeutics, and vaccines.[262] In addition, Chancellor Merkel provided strong leadership in domestic and global COVID-19 responses. For example, Germany committed €525 million for global activities at the international pledging Global Response initiative meeting in 2020.[263] Germany's political and financial support for WHO remained. However, in the first half of 2020, no coordinated global COVID-19 policy between the ministries had been developed. Readjusted priorities and structures could be found within and between the three main ministries involved in the foreign response to COVID-19. Indeed, before COVID-19 was declared a public-health emergency of international concern, the Ministry of Economic Cooperation and Development had decided to cut most of its bilateral health cooperation and increase multilateral funding stemming from a strategic reform, known as BMZ2030.[264] To respond to COVID-19 in early 2020, Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung launched an emergency-aid package reallocating financial resources to the global response using existing bilateral and multilateral channels. For this aid package, the Ministry of Economic Cooperation and Development strengthened its global-health portfolio, especially on pandemic preparedness and One Health, by creating a department for health protection, health security, and sustainability.[265–267]

The Bundesministerium für Gesundheit, dealing mainly with the German domestic COVID-19 response, played a major role in global-health issues at Germany's EU Council presidency.[268] The German Foreign Office increased its interest in humanitarian aid and in WHO since WHO became enmeshed in tensions between the USA and China.[269] These structural changes increased Germany's global health policy making related to health security. Within the German Parliament, most political parties launched position papers on COVID-19 and global health with similar priorities, which would make synergetic policy making more likely in the future.[270]

After getting the third wave of COVID-19 under control with a lockdown, Germany's national response plan to the virus mainly consisted of increased rapid testing and continuously boosting the national vaccination campaign to increase access to vaccines for all population groups.

By declaring the epidemic as still ongoing in June, 2021,[271] Germany continued with a stronger centralised COVID-19 policy approach, giving the federal states greater leeway to set regulations for testing, vaccines, and occupational safety[272] without requiring approval from the federal council.[273] Germany continues to emphasise multilateralism and universal health coverage over bilateral agreements and vaccine nationalism. According to the German Foreign Office and WHO, Germany pledged to support international efforts against the global pandemic with €2·6 billion to procure vaccines, diagnostics, and drugs to counteract global shortages and challenges in delivery to boost access to COVID-19 tools (via the Access to COVID-19 Tools [ACT]-Accelerator partnership) for the poorest nations.[272,274] As of June, 2021, Germany supplied €3 billion, most of which went to COVID-19 Vaccines Global Access (COVAX), and by the end of 2021, Germany had donated 30 million vaccine doses from its national supply, covering a quarter of the EU's pledged 120 million vaccine doses.[272] Germany has contributed US$1·2 billion to COVAX, second only to the USA.[275]

Japan's foreign policy response to COVID-19 has been to reinforce its attention on collective, international efforts to "building resilient and flexible health systems"[276] in LMICs with a strong universal health coverage-oriented agenda. At the Coronavirus Global Response conference hosted by the European Commission in May, 2020, Japan pledged $834 million to contribute to domestic and global COVID-19 efforts, focusing on developing and improving access to therapeutic drugs and vaccines. This pledge included financial contributions to the World Bank, International Monetary Fund, and the Asia Development Bank for loans, grants, and debt relief in LMICs, as well as a $234 million contribution to GAVI and the Coalition for Epidemic Preparedness Innovations (CEPI) partnership.[276,277] Japan pledged more than $1·54 billion to countries with weak

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health systems, including through multilateral organisations.[277] Additionally, Japan pledged to protect the economies of the LMICs it has close economic relationships with.[276] Japan called for a new world; that is, the principle of reflection following the epidemic, leading to increased trust and cooperation, for example by prioritising human security and livelihoods above economic development.[276] In 2021, Japan's global COVID-19 response continued to emphasise multilateral approaches to vaccine development and distribution and strongly embraced the principle of universal health coverage in its COVID-19 response—with particular attention on ensuring equitable access to vaccines in LMICs. Japan contributed to creating the ACT Accelerator and co-hosted the COVAX Advance Market Commitment (AMC) Summit with GAVI in June 2021.[228] As of April, 2021, Japan was among the top contributors to the COVAX AMC initiative with its contribution of $200 million.[277]

The UK responded to calls to financially support LMICs facing health and humanitarian crises, economic hardships, and negative impacts on their health systems resulting from COVID-19.[279,280] The former development agency, the Department for International Development, together with some of its European counterparts, including Germany, Sweden, Denmark, Finland, Norway and Iceland, publicly called for a global, multilateral response to COVID-19, which was seen as crucial in mitigating the impacts of the virus in LMICs, and essential if HICs are to protect their own populations and economies.[281] This effort included international collaboration to develop a COVID-19 vaccine through contributing finances to and strengthening CEPI. Commentators pointed out that the UK's approach to COVID-19 resembled that of the USA during the Trump administration: appealing to voluntary public cooperation rather than introducing strict rules on movement as favoured by other European countries. Despite these similarities in domestic policy, the multilateral thinking of the UK and other European countries to COVID-19 contrasted with the more unilateralist approach of the Trump Government.[282] Moreover, COVID-19 negatively affected the UK's hitherto largely pro-China standpoint. Notwithstanding the UK's pragmatic need to secure alternative trading partners amid its exit from the EU, and its dependence on imports of personal protective equipment manufactured in China, diplomatic relations between the UK and China became strained since the onset of the pandemic because China was widely seen as trying to conceal the outbreak of COVID-19.[283] In 2021, the UK continued to promote multilateral approaches to COVID-19. At the 2021 G7 summit hosted by the UK, leaders signed the Carbis Bay Declaration and pledged one billion doses of vaccines for poorer nations.[232] The UK was among the top three contributors to the COVAX AMC after the USA and Germany as of April, 2021, with its $735 million contribution.[278]

According to the Department of State, the USA had made $900 million available for COVID-19 response efforts by mid-2020, including health, humanitarian, and economic assistance in 120 countries. With this money came assertions by the USA about its generosity and global leadership in tackling COVID-19 and other major diseases.[284] However, beneficiaries of US support cannot use funds to procure personal-protective equipment without previous approval from USAID.[285] Meanwhile, heightened US concerns about the effects of COVID-19 on its own population and economy, were embodied in a Senate bill, the Global Health Security and Diplomacy Act 2020, that put health security and diplomatic interests into sharp focus. The bill aimed to: "advance the global health security and diplomacy objectives of the United States".[286] President Trump accused the WHO's leadership of being "very China centric"[287] because it was believed the organisation was not sufficiently critical of China's delay in sharing information of the emerging COVID-19 outbreak. These allegations led to Trump stating he would freeze US funding for WHO, provoking much consternation, especially since the USA is WHO's largest funder, representing 16% of its budget. At that time, it seemed likely this move would involve the USA actually leaving WHO, and many commentators warned that this could weaken the organisation, thereby aggravating existing fragmentation in global health, with the likelihood of negative impacts on the global response to the virus and other major health issues.[288,289] Most commentators acknowledged this issue as a pretext for Trump's broad hostility towards multilateralism, and believed that it reflected ongoing geopolitical tensions between the USA and China, and was designed to divert attention from domestic failings in tackling COVID-19 ahead of the presidential elections in November, 2020.[288] Many of Trump's statements and policies were overturned by the Biden Administration—not least restoring funding and membership to WHO. Biden has launched an American Rescue plan for global COVID-19 efforts involving US$11 billion of support for: "the international health and humanitarian response; [to] mitigate the pandemic's devastating impact on global health, food security, and gender-based violence; [to] support international efforts to develop and distribute medical countermeasures for COVID-19; and [to] build the capacity required to fight COVID-19, its variants, and emerging biological threats". The USA is also supporting the Access to COVID-19 Tools Accelerator and joining the COVAX AMC Facility.[230] Indeed, the USA has pledged more than any other country to the COVAX AMC fund: US$4 billion as of April, 2021.[278]

How do the studied HICs compare?

Germany and Japan contributed the highest proportion of development assistance for health through multilateral channels; the USA had the lowest, although it provided the highest overall development assistance for health. Of the four countries, Germany provided the greatest

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proportion of its development assistance for health through sector-wide approaches and on health systems strengthening programmes; the USA provided the lowest proportion. The German and Japanese leaders both had clear visions about global health, and Japan's influence on global-health agendas increased. Following Trump's nationalist rhetoric about global health, the Biden administration has embraced multilateralism and health security—with particular emphasis on and substantial commitment to global approaches to tacking the COVID-19 crisis. Brexit has dominated the UK's political environment and Prime Minister Johnson's vision on global health has been dominated by cuts and efficiency savings, increasingly focusing on promoting multilateral responses to COVID-19. Germany, Japan, and the UK had single national strategies, while the USA had multiple high-level strategies relating to global health that can detract from a synergised approach. All four countries emphasised health security—and the UK launched the UK Health Security Agency due to the COVID-19 pandemic. The UK and USA emphasised global health diplomacy, while Japan embraced the strongest universal health coverage-related narrative. Germany and the USA had multiple, competing government actors with overlapping roles, while Japan and the UK had fewer actors involved in global-health work and therefore appear to be more synergised. All countries adopted formal and informal coordination mechanisms and processes, which can foster synergies in their global health work. In terms of foreign-policy approaches to COVID-19, Germany, Japan, and the UK embraced more synergistic, multilateral approaches to their foreign policy activities. The Trump administration, despite pledging substantial funding to support COVID-19 efforts in LMICs, controversially distanced itself from multilateralism threatening to withdraw from WHO. President Biden, on the other hand, has reversed these policies, in favour of much more synergistic, multilateral thinking.

Conclusions

This section describes the key problems of fragmentation at the global level and within selected HICs' global-health policies and systems. There are multiple, interconnected factors causing fragmentation at the global level: the increasing complexity of the global-health architecture, problems of global-health leadership, self interests of many global-health actors, and problems of weak accountability and asymmetric power relations. Many problems of fragmentation in global health stem from the power and self interests of the HICs providing development assistance for health, which makes change difficult. We explained what can be substantial problems of fragmentation within selected HICs' global-health policies and systems, and differences in the agendas and priorities relating to the universal health coverage, health security, and enabling healthy lives (ie, health promotion) between different HICs. The COVID-19 pandemic amplified the consequences of fragmentation in global health: many countries adopt a narrow health-security approach to protecting their own borders and furthering their own interests and therefore remain resistant to the idea that global solidarity is needed in tackling the pandemic, which, given time, would also serve national self interests. The problem of fragmentation has been widely acknowledged for many years, and there have been many multilateral efforts to improve synergies—indeed the COVID-19 pandemic has led to calls for a legally binding international treaty for pandemic preparedness and prevention. Discussions on whether and how such a treaty will go ahead are ongoing, and the outcome of these discussions is expected to be announced at the 77th World Health Assembly in 2024. Nevertheless, many multilateral efforts to improve synergies have not been successful because they have increased the complexity of the global-health architecture, and most efforts are voluntary and non-binding, meaning signatories commonly fail to follow through on their commitments.

Overall conclusions and recommendations

As we have explained in this Commission, there are no simple answers to the questions we set out to answer in 2018.[1] At times fragmentation stems from factors within countries such as weak institutions, poorly informed internal planning and budgeting, and political priorities. At other times, fragmentation stems from external colonial decision-making approaches and priorities in which power is consistently exercised and reinforced through legal, political, and economic means by some nations, institutions, or individuals over others with an underlying assumption of an inherent superiority in all decisions of the colonising nation, institution, or individual exerting power over the colonised (ie, the one over whom power is being exercised). In 2020, the COVID-19 pandemic took precedence for many of the Commissioners, but the Commission continued to meet regularly online, and as our work continued the early response to the pandemic itself provided greater understanding of fragmentation between the agendas and synergies versus dis-synergies at intersections between the agendas as well as potential solutions.

Initially some, not all, of the Commissioners had identified dis-synergies as an issue mainly of concern in resource-constrained contexts, driven by a paucity of coordination in providing development assistance for health at the global and country levels, among other factors. As the Commission gathered evidence and observed the evolution of the COVID-19 pandemic, the Commission's thinking shifted towards seeing dis-synergies as a concern across all countries at all income levels. The drivers of dis-synergies included frameworks, laws, policies, systems, institutional arrangements, and practices that focused resources in ways that led to

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imbalances between measures for health promotion, health security, and universal health coverage.

The manifestations of dis-synergies was that some health conditions and portions of the health system were selectively favoured and optimised over others. This phenomenon was noted to result in suboptimal functioning of country and global health systems and their ability to support desired population health outcomes.

The evidence suggested an urgent need for more efforts at reducing fragmentation and increasing synergistic approaches whenever possible. There is an urgent need for widely shared values and principles; a comprehensive, holistic vision; and health and legal frameworks that integrate promotion, surveillance, prevention, control, treatment, care, and rehabilitation. The evidence also showed the need for a national-policy process that engages and builds consensus and coordinates roles across multiple actors and sectors in and beyond the health system; adequate financing backed by technical expertise; and strong systems and institutions that enable health promotion, health security, and universal health coverage. These features are often built over time and need enabling contexts, including sociopolitical cultures, the global political economy, market, and structural forces. Resource constraints and instability; piecemeal reforms; fragmented governance systems; internal silos; and competing interests across sectors, programmes, and agencies in countries at all income levels drive fragmentation, with situational shocks posing further challenges. Overall, the Commission noted that the problems were near universal and there was much work to be done at global, national, and subnational levels to reduce fragmentation and strengthen synergies.

The reality of national self interest; competing objectives; and imbalances in agency, power, and representation make change difficult. Something other than specific country health security needs, and strengthening synergies or alignment between needs and support appeared to be driving global funding priorities in this instance. Ideally, funding priorities need to align with specific country needs.

Pragmatically, change needs to be driven from the bottom up from countries and top down from the global level. Dialogues in regional LMIC forums displayed imbalances in agency and power and weak representation in shaping development assistance for health, which complicate global health negotiations. However, countries can draw on previous global-level harmonisation efforts, sector-wide funding approaches, and regional cooperation to support efforts towards alignment, synergies, and reduced fragmentation.

Collective HIC efforts to improve synergies in development assistance for health at the global level have often increased the complexity of the global-health architecture or failed because they have been voluntary and non-binding and therefore can later be ignored or dropped.

Analysis of the early response to the COVID-19 pandemic suggested that a siloed and fragmented approach to health-system development, with a paucity of cross-government and internal joined-up promotion of intersections and synergies within intersections, heightened by varying degrees of public mistrust, had left health systems weak and populations vulnerable across many countries.[290] Countries with high Joint External Evaluation scores and high Universal Health Coverage Indexes sometimes did worse than others with lower indexes and scores early in the pandemic, and were unable to sustain an initial effective public-health response and containment.[291] This inability led to patient surges that overwhelmed hospitals and undermined routine health care for maternal and child health and diseases ranging from cancer to diabetes.[292,293] A synergistic approach that enables and strengthens performance across all three agendas rather than one or even two agendas should be the way of the future to prevent death and increase disease containment.

Lockdowns and underfunded social-protection and health systems in many countries worsened public health and wellbeing, the long-term consequences of which are yet to be known.[294] The Commission noted that these direct and indirect effects could have been decreased or even prevented had there been greater focus on health promotion, public health, and health-care capacities (ie, universal health coverage) as essential aspects of health-security preparedness measures in countries. Assessments of health-security preparedness both internally and externally were also key points at which these effects could have been mitigated.

The Commission's review of the West African Ebola outbreaks in the 2010s tells a similar story. The Commission clearly saw the need for resilience in health systems and how weaknesses in health systems and in the public-health response could lead to a prolonged outbreak, undermining the public confidence and trust needed for an effective public-health response. As with the COVID-19 pandemic, the surge of patients caused by weak public-health responses resulted in an inability to care for those who were infected with the Ebola virus and those in need of care for endemic infections (such as malaria) for which there was an increase in reported mortality.[295] Interrupted childhood-vaccination services likewise led to a reported increase in measles mortality[296] and a similar scenario was observed in relation to maternal-health and child-health services;[297–300] but it appears this lesson went unheeded by the Global Health Security Agenda and many partner countries at all income levels. However, in some Global Health Security Agenda partner countries—particularly those that had previous outbreaks of SARS and MERS coronavirus—there had been a concentration on strengthening and sustaining effective public-health detection, response,

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and resilience in health care that accommodated intermittent surges of patients with SARS-CoV-2. In these countries routine health-care activities were also continued, and overall death rates remained comparatively low.[290] Equally, in relation to Ebola, there is evidence from LMICs of how a comprehensive public-health response; strong primary-care health systems capacities at the subnational level linked to and supported by national and global levels; and active collaborations between communities and states enabled a more effective response to these previous pandemics, providing a foundation for the response to COVID-19.[5,301] Lessons learnt from these previous pandemics in LMICs emphasise the importance of the recognition that innovations, learning, ideas, and models originate and should flow multiple ways between countries of all income levels. The colonial and neocolonial assumptions of a one-way flow of innovation and learning will not help global health in current and future challenges. In fact, even in the past these models did not reflect reality.

From the Commission's review of the epidemiology and natural history of COVID-19 during the first year of the pandemic, it was noted that those at risk of serious illness and death after infection were the elderly and those of younger age with preventable comorbidities such as obesity.[302,303] The review also showed that low-income and minority-ethnic workers working in overcrowded, poorly ventilated conditions who did not have options for home working, and households living in multigeneration crowded accommodation, among others, were at increased risk of exposure due to their living, working, and social conditions.[5,304] Inequalities in social and economic conditions before the pandemic contributed to the high death toll from COVID-19.[304] Had assessment and strengthening of the measures required in various sectors that enable healthy lives such as environments for and encouragement of physical activity, and public health regulation of tobacco and alcohol, been effective and long term, the public risk and effect, and the health-care burden and mortality during the COVID-19 pandemic, could perhaps have been lower.[4]

The natural case study presented by the COVID-19 pandemic showed the Commission the consequences of a siloed non-synergistic approach to pandemic prevention, preparedness, and response that concentrated on one function of the health system—public-health surveillance and response capacity as outlined in the International Health Regulations—rather than by considering the health system as a whole with public health, resilience in health care and universal health coverage, and enabling healthy lives through effective health promotion. Countries must improve their ability to work synergistically to avoid such effects in the future.

In summary, the literature reviews and case studies conducted by the Commission, and that of the COVID-19 pandemic, show that all countries' governments need to synergistically implement multiple strategies. First, countries must better facilitate healthy living, working, and social conditions and community-health systems to prevent, reduce, and control exposure to infections, development of comorbidities, and severe outcomes from infection. Second, effective outbreak-detection and response capacities must be developed as described by the International Health Regulations. Finally, comprehensive people-centred health systems must be developed and resourced at all levels and should be equitable and sufficiently robust to manage surges of patients whether caused by communicable or non-communicable conditions when necessary.

The key points that the Commission noted are that missed synergies in LMICs are caused by fragmentation in development assistance for health at the global level; by a failure of countries receiving development assistance

Panel 3: Conclusions

Missed synergies and fragmentation are generally undesirable and universal

Currently, many global, national, and subnational health investments, policies, programmes, and systems for universal health coverage, health security, and health promotion are fragmented and irrationally funded rather than being well synergised, with outcomes of underinvestment in public health capacity; poor resilience to accommodate needs in increased health-care demand during disease surges; and populations that are more vulnerable to serious disease and its social and economic consequences

Ill-considered national self interests and colonial frameworks drive missed synergies

Ill-considered political and national self interests, and colonial frameworks of central decision making without critical questioning of validity, are drivers of missed synergies and fragmentation in national, subnational, and global health

COVID-19 has been our wake-up call

The response to the COVID-19 pandemic has shown why it makes good population-health sense for all countries, regardless of income level, to develop comprehensive health systems in which there are synergies between health security, health promotion, and universal health coverage. These efforts will ensure that countries can better respond to pandemics and better ensure that populations are more resistant to the consequences of disease

There is an urgent need to move away from ill-considered political and national interests and decisions to avoid missed synergies and fragmentation in both national and global health

We must urgently reframe health to move the away from the ill-considered political and national self interests that facilitate the drivers of missed synergies and fragmentation. This reframing must alter national and global health as follows:

- Promote and support global, national, and subnational mechanisms that facilitate synergies at the agenda intersections between health security, health promotion, and universal health coverage as a means of ensuring resilient and healthy populations
- Ensure a decolonised approach that avoids centralised and top-down decision making based on power imbalances within and between countries whether driven by politics, resources, or other factors
- Recognise that in an unavoidably interconnected world, global solidarity toward synergies between the agendas of health security, universal health coverage, and health promotion in all countries regardless of income can be the best way of promoting national self interest in health
- Begin with international organisations as they consider their post-pandemic strategies because they serve as an example to many countries around the world and are themselves at times inadvertent drivers of missed synergies and fragmentation

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for health to negotiate and ensure that assistance does not skew their national priorities; and, finally, that fragmentation and failed synergies are occurring in countries of all income levels.[305]

In conclusion, a synergy is essentially an intervention, capacity, or policy that positively and substantially affects at least two of the three goals of universal health coverage, health security, and health promotion. Synergies occur at the points of intersection between the agendas. Fragmentation occurs when policy and programme design and implementation for the agendas is done in parallel with little or no attention to intersections and synergies at intersections between the three agendas. Fragmented approaches to these three goals are harmful and are enabled by decision making that is driven by abuses of power disparities between and within countries in colonial and self-interested approaches that are non-inclusive, context-ignorant, or narrowly nationalistic.

None of these three goals can be sustainably achieved and maintained in steady state or in a crisis without purposefully realising the synergies between them, as the COVID-19 pandemic has shown, making synergies not merely desirable but necessary. We see the failure of governments and global health actors to pay attention to, recognise, and evaluate potential synergies as an omission or shortcoming in decision making and action. Nevertheless, the evidence we present here shows the feasibility of countries at all income levels taking synergistic approaches to these three goals, and the public-health benefits of doing so. Bringing fragmented systems together into a more synergistic approach to the three goals of universal health coverage, health security, and health promotion will require long-term processes rife with political obstacles, but will be necessary if we are serious about building more resilient, healthy societies. Powerful global-health actors should support such efforts, and so also should national governments at all income levels.

The final conclusions and recommendations of the Commission are outlined in panel 3.

Contributors

All authors contributed to the conceptualisation, evidence gathering, analysis, and processes of the commission and reviewed the draft and final reports. IA, DH, and GO co-chaired the Commission. The core report writing team comprised: IA, DH, SM, GO, AJ, CB, HBA, LH, RL, AM, SLM, WP, DV, and NS.

Declaration of interests

We declare no competing interests.

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