

An Introduction to Philanthropic Funding to Prevent Pandemics

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PAX
sapiens



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The past two years illustrate the need for the world to prevent the devastation caused by pandemic disease. COVID-19 has set back advances the world has made in almost every aspect of human security. Life expectancy, gender equality, economic development, and local and international institutions have all been demonstrably impacted by this disease – and many epidemiologists are of the opinion that COVID could have been significantly worse! In many ways, this was a test for humanity, preparing us for some future disease that is even more destructive. Can anyone claim that humanity passed this test?

Pandemic prevention is a classic problem of global collective action. We know well what's needed to prevent future pandemics. We also have the ability to identify and respond quickly to prevent local outbreaks from becoming global. However, we struggle to actually do this. Why? I believe, in part, it's because there is no global constituency for the response we need. Most sectors of society are focused on groups or incentives that are local and short-term. Governments only represent their citizens; it's why they exist. Businesses work for their shareholders. At the global level, where cooperation and institution building are needed, very few institutions are able to really work and think in the long term. The result is that for too many issues, the world faces the same basic problem: Seven billion people and no plan.

I believe that philanthropy is a promising sector that can take up this challenge. The good news, and the bad news, is that as philanthropists, we are free to choose what we focus on. It's our money, ultimately, and nobody tells us what to do with it. That can cause problems, of course, but it also means that we are free from the pressures for short-term and parochial focus that most organizations too often face.

I believe pandemic prevention is an area that is ripe for philanthropic funding. Partly because it needs resources, but more because it also needs planning and coordination. Money by itself is stupid, but with leadership from stakeholders, it accelerates things. In the worst case, it will just let humanity be stupid faster.

In the case of pandemic prevention, I want to invite everyone to think about this issue both as a question of how we can help but also how we can work together. This guide is our first step to coming up with a map of different ways that new donors might help the world in this area – but we hope that this first step will lead to others steps we can take together.



Marcel Arsenault
Founder and CEO
PAX sapiens

The international community under-invests in pandemic preparedness and delays mobilizing a response to a local outbreak that could prevent pandemics. This results in the loss of millions of lives and trillions of dollars in economic output. Future generations will carry our heavy COVID-19 debt, starving many areas of well-being.



“Globally, there are some 600 infectious disease outbreaks annually, of which 40-50 turn into country-level outbreaks or epidemics. Since 2007, six outbreaks have been declared Public Health Emergencies of International Concern (PHEIC) by the World Health Organization (WHO) (Radin, 2021)”.

When these outbreaks happen, they must be stopped before becoming an epidemic and then a pandemic. Despite the unfolding local and global impacts of SARS, Zika, MERS, and Ebola during the past two decades, and the many recommendations offered, the world was unprepared for the COVID-19 pandemic (Bollyky & Patrick, 2021; Craven et al., 2021). Philanthropy can potentially close identified gaps by going beyond metronomically engineered solutions and show that entrepreneurial partnerships carry technical and political plausibility to help slow these faster and further epidemics of the 21st century (Chen, 2022).

Unlike governments and businesses, philanthropists are not restricted by an electorate or shareholders and can fund iterations of ideas in the search for long-term solutions to complex problems.

With this in mind, philanthropists can choose to speak up and use their freedom to act—when others are unwilling or unable—and embrace complex systems. Charitable subsectors funded by high-net-worth individuals or large foundations can be thought of as important pieces of a more holistic solution to prevent and manage pandemics that benefit each generation. Yet challenges remain to create political will and translate ideas into action.

The history of philanthropy and disease control suggests the promise of fostering prevention that kicks into gear quickly when an outbreak occurs. Philanthropists can help leaders and organizations design productive solutions with accountability, linking finance to results. Beyond a narrowed humanitarian perspective of pandemics, charitable work in education, technology, climate, equity, and justice are cross-cutting and on full display before and after a pandemic. Emergency funds will dry up and attention will shift. The conversation on COVID-19 mitigation is already veering to the strengthening of health systems to prepare for the next worldwide outbreak. But not all social sector funding is of equal value, and it is the philanthropist that has the longer time horizon and higher risk

tolerance to proffer the transformation needed as we face the threat of present and future pandemics. As many governments are unable to garner foreign aid spending, foundations, corporations, and philanthropists need to expand their influence to respond effectively to crises. Given its multi-sector and wide geographic reach, philanthropic work is particularly geared to give structure and unity to this collective response, reducing disease threats and benchmarking return on investment at a local up to a global level.

PAX *sapiens* hopes to cultivate insight and shared goals among philanthropists and give interested participants fuller potential to engage in collective work on pandemic prevention. This could result in greater individual or pooled financial commitments that accelerate investment in institutions and health systems for preparedness, at the same time yielding benefits to confront continuing disease threats.

This guide steps through changemaker roles to prevent pandemics and the relationship to existing charitable giving and presents four entry points of engagement. The entry points are global governance, early detection, financing, and countermeasures. This guide connects philanthropists, coming with their own interests, to public health experts to establish clear and targeted giving. PAX *sapiens* works through collaborative and adaptive systems and wants to plan with others similarly drawn to invest in pandemic prevention. You will find the following sections in our document:

1

Changemaker Investments:

A review of the links between pandemic prevention and other areas of philanthropic giving, and a discussion of how existing philanthropic communities can connect to pandemic prevention.

2

Entry Points for Philanthropic Engagement:

An introduction to the expert consensus on major ways to strengthen global systems for pandemic prevention, noting current implementing NGOs and other donors working on the major issue areas identified.

3

What's next?:

Suggested ways that interested donors can follow up with organizations or experts to learn more about what you can do, and a call for anyone interested to join Marcel Arsenault and PAX *sapiens* in sharing plans for coordinated impact.

For those interested in further depth, you will find an addendum at the end of this report detailing the role of philanthropy in the current pandemic prevention system. It identifies major sources of both governmental and private funding and outlines the current lay of the land around philanthropic investment in pandemic prevention.

Changemaker Investments

Pandemic prevention is a problem waiting for solutions. And yet, few parts of society are incentivized to act in a coordinated way to reach these solutions. Changemakers see the problem, discover new applications of ideas that create solutions with impact, and attract further innovation. Philanthropists considering engaging in pandemic prevention can almost certainly find their lane to make

meaningful change. Philanthropic leadership in technology and global health came together after the Ebola crisis in West Africa in 2014 to form the Pandemic Collective (PC), an informal group that leverages resources and expertise, and fosters synergy among experts rising to the ever-present challenge of global health threats. Pandemic prevention is not a confined technical question isolated from other areas that philanthropists care about. The brunt of COVID-19 shows that this isn't the case. Because pandemics are defined in part by their large-scale spread, they have systemic impacts on almost all aspects of human security.

Notably, in January 2022, Helen Clark and Ellen Johnson Sirleaf, co-chairs of the Independent Panel for Pandemic Preparedness and Response, and Gordon Brown, World Health Organization (WHO) Ambassador for Global Health Financing, penned a letter on the world's "ailing approach to investing in global public health," unmasking the decades-long failure to invest in pandemic prevention and, more broadly, in health security of all people (Shanmugaratnam et al., 2021). The very basics of disease control—identifying the pathogen and those exposed, breaking the transmission, tracking spread, and communicating risk—require sustainable financing at the country-level. Low and middle-income countries, the most highly surveilled and simultaneously pressured to share data and pathogen samples, possess critical voices in preventing pandemics. Strong country and regional movements on regulation, manufacturing, and data sharing now create opportunities to quantify outbreak metrics and identify outbreaks averted. Health security at home and around the world cannot be achieved without increased and sustained investment, with an estimated five year \$124 billion for country-level capacity alone (Eaneff et al., 2022).

Beyond this specific focus on traditional disease control, did you know that causes such as education and the arts directly align with disease prevention? The collective impacts of disease on issues including food security, institutional legitimacy, and political factions have led philanthropists focused on peace and security to raise concerns about the impacts of COVID-19 on population displacement (Ritchie, 2021). COVID-19 has reversed trends in women's empowerment across the world, further driving a wedge in gender equality. Funders interested in amplifying women's engagement in economic and political life have flagged concerns about the lack of philanthropic pandemic funds. Climate crises can drive the emergence of new diseases, both through changing environments, increased clearing of wildlands, and rising urban-wildlife development. Philanthropists interested in climate change are already working on pandemic prevention with consideration of the Convention on Biological Diversity and newer recognition of global governance and planetary health law.

Further charitable sectors that actively link to pandemics and their ramifications are:



Equitable Healthcare Access

Donors working on equity issues internationally or across different communities can ensure equitable development and distribution of diagnostics, therapeutics, vaccines (DTV), and economic and social protection providing equitable access to healthcare services.



Data Science

Donors interested in improving evidence-based social impact or supporting targeted work on data science can modernize public health surveillance data, analytics, technology, and subsequent decision-making.



Gender Equality

Donors working on supporting women can focus on the loss of education years, loss of livelihood, loss of economic opportunity of women employed in lower wage jobs in health care, and high risk of exposure for service workers.



Peacebuilding

Donors working in peacebuilding can support healthcare provision in conflict areas or strengthen healthcare institutions. Disease prevention can itself be peacebuilding. Conflict manifests with disease outbreaks, given a breakdown of healthcare systems, and erodes trust and cooperation instrumental in preventing outbreaks.



Monitoring and Evaluation

Donors focused on rigorous M&E tools or improving the work of philanthropy can strive to improve quantitative “return on investment” assessments, and standardize measures of how well countries are detecting and responding to outbreaks.



HIV & Cancer

Donors can work on protecting immunocompromised populations at the highest risk of disease and prevent funding from being diverted from existing programs to focus on COVID-19.



Finance and Government

Donors interested in global institutions can support a scaled and rebalanced WHO budget to ensure that people everywhere have the opportunity to live a healthy life and strengthen the ability to consistently detect and alert international emergencies.



Journalism

Donors can support the training of journalists and public health professionals to communicate urgency and uncertainties to large swaths of populations; untangle misinformation; and raise awareness of justice, equity, diversity, and inclusion in reporting.

The examples above widen the aperture of viewing pandemic prevention. Thinking broadly, philanthropists can take clear, urgent steps to 1) Fund proximal leaders, 2) Motivate global thematic partnerships, 3) Generate cash/public good capital with implementing institutions, and 4) Incentivize public sector funding and de-risk private capital. The time value of these actions translates into lives saved.

Considering pandemic prevention specifically, several high-level panels and organizations crafted recommendations to strengthen the global system. Based on the recommendations, we identified several entry points and specific organizations with whom donors can connect and align. Some examples discussed in the section below, while not exhaustive, provide distinctive points of entry for donors interested in working on pandemic prevention.

Entry Points for Philanthropic Engagement

Are pandemics preventable? The good news is that the answer is yes, and to a large degree the world knows how. There is a strong existing global system, including national and international governmental bodies and civil society groups, working on the prevention of future pandemics. Obviously, however, this system is not perfect. Pandemics

animate flaws in the global system and press ways to promote accountability, align stakeholders, and ensure sustainable funding beyond official development assistance, including communities, countries, global health institutions, and donors (Frieden et al., 2021). Health systems should be viewed holistically to reduce the impact of the current pandemic, as well as that of future unscripted scenarios. From resource mobilization to the application of surveillance technologies, fulfillment of legal obligations, and access to countermeasures; all must fit together.

Many questions remain as to what architecture for global health will look like in the next decades. Nonetheless, we do know that any architecture demands equipping larger bands of the world's population to prevent and respond and is seen as mutually beneficial (not viewed singularly as a humanitarian imperative).

Both before and after COVID-19, many international and regional bodies have considered how to strengthen the global system. The Independent Panel for Pandemic Preparedness and Response Report COVID-19: Make it the Last Pandemic (Sirleaf et al., 2021) spoke concisely to the panel's deep grasp of normative, institutional, and structural powers that shape the ability to finance health emergencies. Several other high-level panels (G7, G20 HLIP, Pan-European Commission) made similar observations and recommendations. The Working Group on Strengthening WHO Preparedness and Response to Health Emergencies asked for the creation of a dashboard to track the many COVID-19 related recommendations (WHO Executive Board, 2022). The expert panels focused on four themes: global architecture, surveillance, financing, and medical countermeasures. These four themes present coordinated entry points for philanthropic engagement and better position philanthropic funding for impact.

The next section describes the entry points for donors interested in supporting these approaches. For each of the entry points identified by the Independent Panel, it provides a brief overview of the current status of the discussion and identifies key organizations in the pandemic prevention space, including both implementing organizations that can translate funding into impact and also other donors who may provide peer support or engagement.

Global Architecture (Governance)

The globally agreed-upon pandemic blueprint of the international health regulations (IHR, 2005) to guide roles and responsibilities contained limited authorities and financing to meet the actions required at a global scale. Preventing future pandemics requires strengthening global and country-level institutions. At the moment, global health entities such as WHO are systemically under-funded relative to their own stated goals. They also lack in many cases a legal foundation for early investigation or information sharing around new diseases, relying instead on voluntary information sharing from member states. Even where there are nominal requirements for information sharing, there are little or no enforcement options for states choosing not to do so. Amendments to the IHR 2005 and a proposed treaty might have signatories adhere to timely sharing of disease outbreak information, as well as sharing science and technology to increase the supply of vaccines, therapeutics, and other medical countermeasures. COVID-19 has proven that our collective security and health depends on working together, in solidarity not in isolationism, and deconflicted with other data regimes (Gostin et al., 2021).

One proposed solution could take the form of an international legally binding instrument, perhaps in the form of a global pandemic treaty (Burci et al, 2021). Beyond the traditional Geneva-based processes and structures, the discussions should immediately elevate the voices of those from low- and middle-income countries most impacted and incorporate country-derived ideas and processes.

At a policy level, we will only succeed if we reach an agreement for a strong international pandemic preparedness and response treaty with binding and non-binding instruments of compliance, synchronous with navigating geopolitical tensions. As of this writing, the member states of WHO have agreed to start a process to consider a new instrument, perhaps in the form of a treaty. An International Negotiating Body will work on developing a new legal instrument over the next few years. A pandemic treaty would be coordinated by WHO and the UN, involving a wide representation of countries and external organizations. For countries to engage and adhere to the agreement, the treaty will need to address the national interests of its members and the financial resources to be implemented.

There are other proposals on the table to develop political stewardship beyond WHO and the existing global health architecture (Pandemic Action Network, 2021). There is also a proposal for a peer-review system whereby countries review and publish their health preparedness capacities for greater transparency (M'Bikay & Zappile, 2021).

Identified needs in this sphere:

1. Support the process to establish a pandemic framework convention to create legal obligations and norms
2. Design and build systems and structures that are inclusive and representative
3. Support WHO financial independence and improve the formal or informal authority of the WHO to act to prevent pandemics

Current NGOs working on global architecture:

Global Health Centre at the Graduate Institute of International and Development Studies in Geneva, UN Foundation, Georgetown Center for Global Health Science and Security, Pandemic Action Network, Global Strategy Lab at York University

Current donors working on global architecture:

Bill and Melinda Gates Foundation, Wellcome

Early Detection (Surveillance)

In analyzing the spread of SARS-COV-2 and how an outbreak became a pandemic, a chronology emerges showing blank spots where real-time data did not exist (Singh et al., 2021). COVID-19 also disclosed a demand for stronger epidemic intelligence to detect animal-human spillover and the emergence of clinical cases of pneumonia of unknown etiology to generate actionable global alerts. “Despite decades of investment, COVID-19 has revealed the great gaps that exist in the world’s ability to forecast, detect, assess and respond to outbreaks that threaten people worldwide,” said Dr. Michael Ryan, Executive Director of WHO’s Health Emergency Programme (Germany Open Hub for Pandemic and Epidemic Intelligence in Berlin, 2021).

Public health surveillance is the ongoing tracking of events threatening the health and well-being of the population and, in practice, can be challenging. Ethical dilemmas related to privacy, equity, and the common good are particularly front of mind during health emergencies. We have seen surveillance tested on transparency, timeliness, equitable data sharing, and trust in declaring a public health emergency of international concern (PHEIC). As recognized across high-level review panels, the creation of a global early warning platform has urgency but should not be elevated above the need for local systems that provide context and boots on the ground early in an outbreak. Disease detection employs various data collection models that require a “One Health” approach blending human and animal surveillance to detect human and animal pathogens as well as laboratory capacity for confirmation of outbreaks. Secure health systems and multi-sector workforces must also be in place and appropriately utilized. Systems that share information both formally through government channels as well as informally using non-governmental pathways improve early detection and response. Transparent and accountable public health practice relies on data, driving us in the direction of modern, interoperable, and secure public health information (Frieden et al., 2021). This forward momentum is an opportunity to rethink how systems work with civil society in a coordinated manner for pandemic preparedness.

Identified needs in this sphere:

1. Strengthen local disease detection systems
2. Support epidemiologic intelligence innovations that feed up to global disease detection systems
3. Balance support of human and animal (One Health) surveillance
4. Improve mechanisms for quick decision making and data sharing

Current NGOs working on early detection:

ProMED, Resolve to Save Lives, the Rockefeller Foundation, Institute for Health Metrics and Evaluation, Pandemic Collective, Bill and Melinda Gates Foundation, Skoll Foundation, University of Oxford Pandemic Science Centre

Current donors working on early detection:

Bill and Melinda Gates Foundation, Rockefeller Foundation, Skoll Foundation, Wellcome

Financing

The unsuccessful piecing together of funds during an emergency can be avoided by having mechanisms in place that promote longer-term prevention investments (Glassman et al., 2021). A holistic view of financing is not merely more money but the ability to use it effectively. Philanthropy can play a role in building systems and structures to reduce bureaucracy and improve efficiencies in program management and operational support to ensure that money is appropriated strategically.

Recent high-level health security reviews emphasize the need for a global financing mechanism that links the flow of money in and money out at trigger points in an evolving epidemic to counter current inefficiencies. The Center for Global Development and the UN Foundation are elevating the non-state actor (private sector, civil society, and philanthropy) role and the urgency to finance preparedness as several of these high-level panels sunset their mission. The creation of pooled funds via an international pandemic financing facility/global health threats fund is an idea proposed by the IPPPR, G7, and G20 to raise consistent and reliable funding for prevention and surge response (Sirleaf et al., 2021). The IPPPR Finance background paper estimated the proposed facility would raise \$5-10 billion per annum for preparedness and up to \$50-100 billion for early response (Radin et al., 2022). Another aspect of financing is the investment in existing systems. Parallel to establishing new financing mechanisms is the question of ensuring that existing organizations, such as the WHO, have sustainable funding to realize returns in healthy lives and economic gains. Dramatically, the independence and success of the World Health Organization is closely tied to sustainable funding and the source of those funds (WHO, 2022).

The COVID-19 pandemic is a shocking display of inequalities within and between countries, showing that people experience a pandemic differently. The inequality rising alongside globalization paints a confusing picture when we look at the disproportionate gain from pandemic preparedness by middle- and high-income countries, yet those same countries have experienced the majority of economic (dollar) loss from COVID-19 (Baum et al., 2021). The value of preparedness at the subnational, national, and regional levels is felt globally. The framing of this value as global public goods translates into financing solutions that are cross-cutting (and well-practiced) with other economic, social, and climate issues that also benefit from pandemic preparedness.

Identified needs in this sphere:

1. Strengthen financing of WHO
2. Increase financing of One Health approaches
3. Support establishment of a new International Financing Institute (IFI) for pandemic preparedness and response (PPR) or Global Health Threats Fund
4. Identify new sources of PPR funding beyond overseas development assistance
5. Support new and measurable targets and benchmarks

Current NGOs working on financing:

UN Foundation, Center for Global Development (CGD), Georgetown Global Health Security Tracker, Georgetown O'Neil Institute for National and Global Public Health Law, Pandemic Action Network (PAN)

Current donors working on financing:

Bill and Melinda Gates Foundation, Wellcome

Medical Countermeasures

To mitigate contagion no matter the country of origin, medical countermeasures require accessibility, rapid deployment, and scaling up in response to a health emergency. Measures to reduce deaths and the risk of the outbreak from becoming a pandemic include “vaccines, antimicrobials, antidotes, and antitoxins, as well as nonpharmaceutical interventions such as ventilators, diagnostics, personal protective equipment, and patient decontamination supplies” (Marinissen et al., 2014).

WHO’s research and development (R&D) blueprint helps prioritize diseases of pandemic potential along with correlate development and equitable access to diagnostics, therapeutics, and vaccines (DTV). The financing framework set up for 2020-2022 budgeting of WHO’s Act-Accelerator handles end-to-end supply chains for countermeasures for pandemics. However, there is no overall agreement to mature the end-to-end aspect of ACT-Accelerator, perhaps based upon complexity, and leave more room for industry and academia to prioritize DTV research and development.

“Since April 2020, the ACT-Accelerator partnership, launched by WHO and partners, has supported the fastest, most coordinated, and successful global effort in history to develop tools to fight a disease” (ACT-A Facilitation Council, 2022). Deploying the targeted number of vaccines, diagnostic tests, treatment, and PPE require stable financing that has so far been a combination of multilateral development bank instruments, donor grants, domestic resources, and fair share contributions.

Launched in 2017, the global partnership CEPI accelerates the development of vaccines to stop future epidemics and models a working public, private, philanthropic, and civil society partnership. CEPI was the only entity with the mandate to invest in de-risking COVID-19 vaccine R&D with global access in mind (Pandemic Action Network, 2022). CEPI, GAVI, and WHO formed COVAX to focus on vaccine demand, particularly in fast-tracking R&D and facilitating market investment and demand (Eccleston-Turner & Upton, 2021).

Given the exigencies of health emergencies, there is a profound need to advocate for pre-negotiated public-private partnerships in the manufacture and delivery of countermeasures. Furthermore, country-level commitments on manufacturing and legal frameworks of licensing and technology transfer should be developed for the risk they face daily between epidemics.

Identified needs in this sphere:

1. Scale support for basic capacities of health facilities to include water, oxygen, and PPE
2. Build research and innovation
3. Incentivize public-private partnerships on countermeasures
4. Develop pre-negotiated procurement of tools
5. Fund established vaccine initiatives

Current NGOs working on medical countermeasures:

CEPI, Oxford Pandemic Science Centre

Current donors working on medical countermeasures:

Wellcome, Bill and Melinda Gates Foundation, The Flu Lab

What's Next?

We have described several avenues of philanthropic engagement that can help reverse a decades-old pattern of underinvestment in pandemic preparedness. We have also provided examples of the deep connections between pandemic prevention and its profound fallout with social, gender, and environmental issues. However, it is only

with cooperative engagement with others similarly motivated, with a shared goal that we will be successful in preventing an outbreak from becoming a pandemic.

So, what's next for you as a philanthropist?

One way to begin prioritized giving is to reach out to experts and organizations already making a difference in the agreed-upon high-level panel recommendations related to global health architecture, disease detection, finance, and medical countermeasures. These entry points of engagement will connect you at the global, national and local systems levels. This guide includes some suggestions for organizations and points of contact who may be able to help you find points of entry into pandemic prevention. Experts from the below-listed organizations are currently performing work perceived as the most influential in reducing the world's vulnerability to future pandemics. Please review the description of their work and connect with them as you wish advisement or consider investments. *PAX sapiens* interacts with many of these organizations and has received approval from individuals as to listed emails. We at *PAX sapiens* are also happy to work directly with you to match your interests with organizations that support your specific interest in pandemic prevention and would be happy to discuss what your specific interests are and how they may bolster the field.

More than that, we remain convinced that it's through coordination and planning that our community can have the most impact. We at *PAX sapiens* are enthusiastic about the idea of partnering with you, either directly on joint projects or as part of a larger process of joint coordination. We invite anyone interested to join us, and contact us, in mapping out a shared path forward for giving in support of pandemic prevention.

Few parts of society are incentivized for active coordination to prevent pandemics. This is despite the fact that the macroeconomic long COVID debt, a moniker given by Ruchir Agarwal Sr. Economist IMF, will be incurred by generations to come. Like you, *PAX sapiens* is also working through what it means to prioritize shared philanthropic action to create change and to protect people from the threat of pandemics. We are happy to share our learning or our connections. Please reach out to us if you have any questions or if we can help you get your bearings as you enter this issue area.

Please contact Conor at dcseyle@paxsapiens.org and he will be happy to facilitate discussions with Marcel or share any of our learning.

Organization	Focus	Website and contact information
Bill & Melinda Gates Foundation (BMGF)	Targeted product development investments, integrated disease surveillance and country support aligned to other global health priorities, and emergency response.	Chris Culver Chris.Culver@gatesfoundation.org www.gatesfoundation.org
Center for Global Development (CGD)	A mission to accelerate the development of vaccines against emerging infectious diseases (EID) and enable equitable access for all during outbreaks.	www.cgdev.org
Coalition for Epidemic Preparedness and Innovations (CEPI)	Innovative global partnership between public, private, philanthropic, and civil society organizations to develop vaccines to stop future epidemics. The mission is to accelerate the development of vaccines and other biologic countermeasures against epidemic and pandemic threats so they can be accessible to all people in need.	cepi.net
Flu Lab	Fuels bold approaches to defeat influenza. Seeks out high-impact opportunities, make investments and grants, evaluate results, and provide opportunities for shared learnings.	Casey Wright and Julie Schafer casey@theflulab.org julie@theflulab.org theflulab.org
Georgetown University Center for Global Health Science and Security	Conducts original research to help decision-makers worldwide build sustainable capacities to prevent, detect, and respond to public health emergencies. Works with partners across the U.S. government, international organizations, and Ministries of Health, Agriculture, and Defense around the world to understand how leaders define, develop, and sustain preparedness for public health emergencies.	Rebecca Katz Rebecca.Katz@georgetown.edu ghss.georgetown.edu
Global Health Centre at the Graduate Institute of International and Development Studies in Geneva	Academic center conducting research, training and strategic convening on issues of governance, politics and power in global health. It aims to open global health to diverse voices, knowledge and ideas. The Centre's Governing Pandemics initiative is tracking global reform processes in the wake of Covid-19, providing policy analysis, a neutral space for convening key stakeholders, and training for practitioners to increase capacity to engage in relevant global governance processes.	Suerie Moon suerie.moon@graduateinstitute.ch Tammam Aloudat tammam.aloudat@graduateinstitute.ch www.governingpandemics.org
Global Strategy Lab, York University Canada	Respond to an increasingly interdependent world where health and well-being are intrinsically shaped by circumstances, decisions, and events occurring in far-away places.	www.globalstrategylab.org/page/our-story
Institute for Health Metrics and Evaluation (IHME)	Delivers to the world timely, relevant, and scientifically valid evidence to improve health policy and practice.	www.healthdata.org
NTI Bio	Works to strengthen biosecurity and pandemic preparedness by identifying and sharing solutions to address new and evolving biological risks and to ensure that strengthening biosecurity is elevated to a global priority now and for the future.	www.nti.org/area/biological/strengthening-biosecurity-and-pandemic-preparedness
Oxford Pandemic Science Center	A new center of academic and industry collaboration to generate actionable information, make affordable health technologies, and support public health intervention.	www.ndm.ox.ac.uk/team/peter-horby
Pandemic Action Network (PAN)	Drives collective action to end the COVID-19 crisis and to ensure the world is prepared for the next pandemic. Works collaboratively, translates learnings and insights into clear messaging, and holds decision-makers accountable.	Gabrielle Fitzgerald & Carolyn Reynolds, Co-Founders gabrielle.fitzgerald@panoramaglobal.org carolyn.reynolds@pandemicactionnetwork.org pandemicactionnetwork.org

Pandemic Collective (PC)	Philanthropic leadership in technology and global health to leverage resources and expertise, and foster synergy among leaders rising to the ever-present challenge of global health threats.	Mark Smolinski mark@endingpandemics.org endingpandemics.org
Program for Monitoring Emerging Diseases (ProMED)	Largest publicly available system conducting global One Health reporting of infectious disease outbreaks used daily by international public health leaders, government officials, physicians, veterinarians, researchers, private companies, journalists and the general public. Timely reporting 24 hours a day, 7 days a week in almost every country in the world.	Marjorie Pollack pollackmp@mindspring.com promedmail.org
Resolve to Save Lives (RTSL), Prevent Epidemics	Committed to making the world safer from epidemics. The Prevent Epidemics team provides technical assistance to at-risk countries directly or through partners, mobilizes resources to support preparedness, and catalyzes political will to address gaps. By working across the spectrum, a small team accelerates progress to make the world safer from the next epidemic.	Amanda McClelland amcclelland@resolvetosavelives.org resolvetosavelives.org/prevent-epidemics
Rockefeller Foundation, Pandemic Prevention Initiative	Aims to help the world detect, prevent, and mitigate pandemic threats to achieve containment as quickly as possible. An independent collaborator with the global community working toward an early warning system for the world. Partnerships span public, private and academic sectors.	www.rockefellerfoundation.org/pandemicpreventioninstitute
Skoll Foundation	Supports social innovations that strengthen health systems in an equitable manner and builds global systems for pandemic prevention and response. Skoll coordinates response across public, private, and civil society sectors both globally and in the U.S., while striking a balance between immediate and longer-term solutions.	skoll.org/health-pandemics
UN Foundation	Strategic partners of the United Nations, bringing together the ideas, people and resources to drive global progress and tackle urgent problems. A hallmark is collaboration for lasting change and innovation to address humanity's greatest challenges.	Kate Dodson kdodson@unfoundation.org unfoundation.org
Wellcome UK	Effective research and coordinated action to stop outbreaks spiraling into global health emergencies.	wellcome.org

Acronyms

BMGF Bill and Melinda Gates Foundation	IPPPR Independent Panel on Pandemic Preparedness and Response
CEF Contingency Funds for Emergencies	MERS Middle East Respiratory Syndrome
CEPI Coalition for Epidemic Preparedness and Innovations	NTI Nuclear Threat Initiative
CGD Center for Global Development	PAN Pandemic Action Network
DTV Diagnostics, Therapeutics, Vaccines	PC Pandemic Collective
GAVI The Vaccine Alliance	ProMED Program for Monitoring Emerging Diseases
GPMB Global Preparedness Monitoring Board	PEF World Bank Pandemic Emergency Financing Facility
HLIP G20's High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response	PPE Personal Protective Equipment
IFI International Financial Institutions	PPR Pandemic preparedness and response
IHR (2005) International Health Regulations (in their current revision of 2005)	RTSL Resolve to Save Lives
IHME Institute for Health Metrics and Evaluation	SARS Severe acute respiratory syndrome
IMF International Monetary Fund	UNF United Nations Foundation
	WHO World Health Organization

Addendum: Philanthropy in the Context of COVID-19

We lack the financial structure to coordinate and accelerate investment in preparedness – a continuum of pivotal points for speedy detection and initiation of investigation – at a national, regional or global level to prevent an outbreak from becoming a pandemic and to prepare for future biological threats. Even WHO’s budget is not level with its global responsibilities (Radin & Eleftheriades, 2021). WHO’s limited institutional and normative powers have played out amidst structural powers that framed the pandemic with imbalanced economic, political and social influences (Patterson et al., 2020).

The annual global cost of pandemics is anywhere between \$570 billion and \$4 trillion per year, depending on severity, according to estimates by the Coalition for Epidemic Preparedness Innovations (World Economic Forum, 2020). Over five years, an investment of \$124 billion is estimated for national-level capacity (globally) to score a “demonstrated capacity” on indicators of preparedness (Eaneff et al., 2022).

There are many mechanisms to fund historic crises at the response level. We can point to the WHO Contingency Funds for Emergencies (CEF), the World Bank Pandemic Emergency Financing Facility (PEF), and the UN Contingency Fund. Yet on the preparedness side there is a clear underinvestment as evidenced by the tracking of funder and recipient profiles during COVID-19. The Global Preparedness and Monitoring Board (GPMB) calls for a collective financing mechanism for preparedness to ensure more sustainable, predictable, flexible, and scalable financing, as well as the need for independent monitoring and mutual accountability (Global Preparedness Monitoring Board, 2021).

In 2021, the IPPPR, G7 and G20 panels agreed the world needs new mechanisms to reach more stable financing for preparedness and response. Proposals at hand include (1) a \$10 billion annual Financial Intermediary Fund (FIF) to be housed at the World Bank, and (2) a Global Health Threats Council, a head-of-government level oversight body likely linked to the United Nations (Brooks et al., 2022). The scope of the finance facility would be to support activities to prevent outbreaks from becoming pandemics. Stable funding would support preparedness and capitalizes a standing contingency fund to be used in the event of a significant outbreak, likely to be most useful in low and lower middle-income scenarios.

In January 2022, fifty non-profit organizations signed a letter to the Global Preparedness Monitoring Board (GPMB) citing the WHO’s current limited and unpredictable financing as ripe for reform so as to meet its mission and buffer it from political influence of donors (Douglas, 2022). The GPMB has yet to prove their influence over policymakers.

A tool called Georgetown Global Health Security Tracking can be used to untangle the morass of data, depicting trends, funder and recipient profiles (Georgetown Global Health

Security Tracking, 2022). Not reflected in this data, is the worrisome pulling of funds from existing critical health programs and their reallocation to COVID-19, creating gaps in otherwise successful health programs such as PEPFAR. Figure 1 ranks the Top 10 funding commitments for 2019-2022 COVID-19 Pandemic.

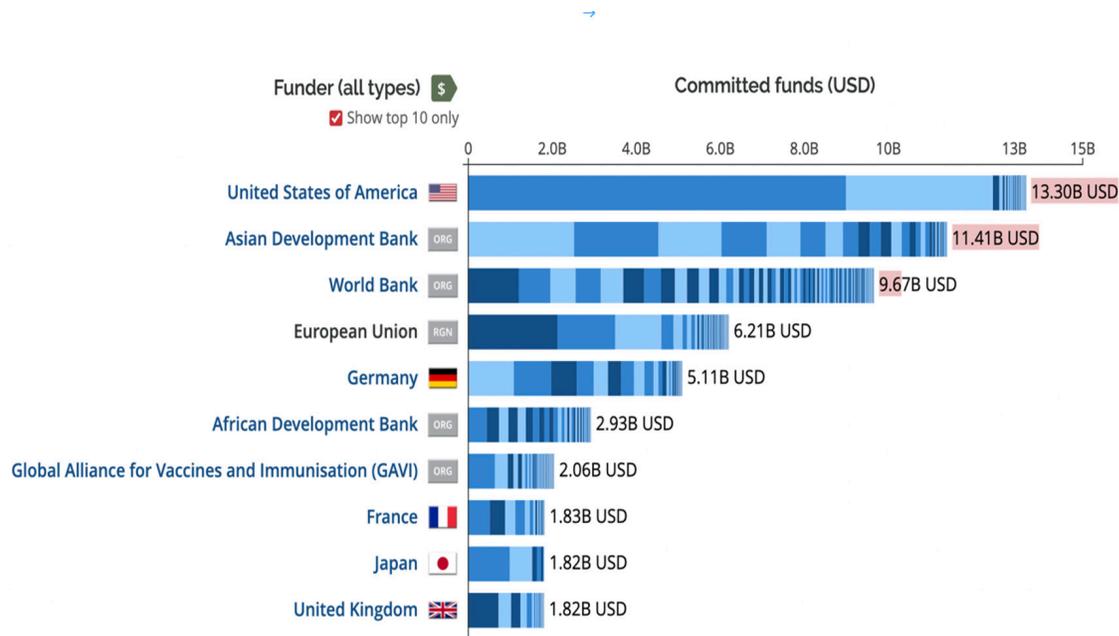


Figure 1: Top 10 Committed Funds for 2019-2022 COVID-19 Pandemic, Global Health Security Tracker

Where does philanthropy sit in all this? Pandemic prevention needs funding at scale, through governments and intergovernmental bodies. But it also needs philanthropic voices and funding to be part of the financial architecture. Philanthropists can act more quickly than governments to fill gaps in the global or national system and explore new ways of delivering services. And philanthropists can be changemakers. Bill Gates anticipated and verbalized warnings of catastrophic outbreaks of influenza type illness nuanced by decades of fatal warnings about epidemics and the risks of global travel. But more than warnings, Bill Gates committed to preventing disease and accelerating vaccine development in a quest for every person to live a healthy, productive life. His work focused on countering infectious diseases and funding vaccine development. He created endowed philanthropic entities bolstered by leadership and financial resources of a magnitude not seen since the leadership and charitable giving in the billions of J.D Rockefeller in the 20th century (in today’s US dollars). Bill Gates and J.D. Rockefeller are examples of leaders in generations of private philanthropists.

In the context of COVID-19, several trends are noted in the Center for Disaster Philanthropy report on foundation giving and COVID-19 focus areas (Soto, et al., 2022). Private foundations are spending a higher percentage of funds on their mission, and there is an increase in trauma informed philanthropy, globalization, and transparency in revealing charitable amounts and donor type. Another philanthropic trend is clear: the continued underspending on prevention.



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