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MOBILIZING FINANCE FOR INFECTIOUS DISEASE PREVENTION, DETECTION, AND RESPONSE: LEARNING BRIEF

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EXECUTIVE SUMMARY

The ongoing COVID-19 pandemic has exacerbated weaknesses in the global health care system. Annual investments in infectious disease prevention research have declined since 2007, while risks of antimicrobial resistance and pathogens with pandemic potential have increased.¹ Health care systems were underfunded and understaffed before COVID-19 emerged. The pandemic has worsened conditions.² Significant investment is required to better prepare for infectious disease outbreaks and strengthen health systems worldwide.

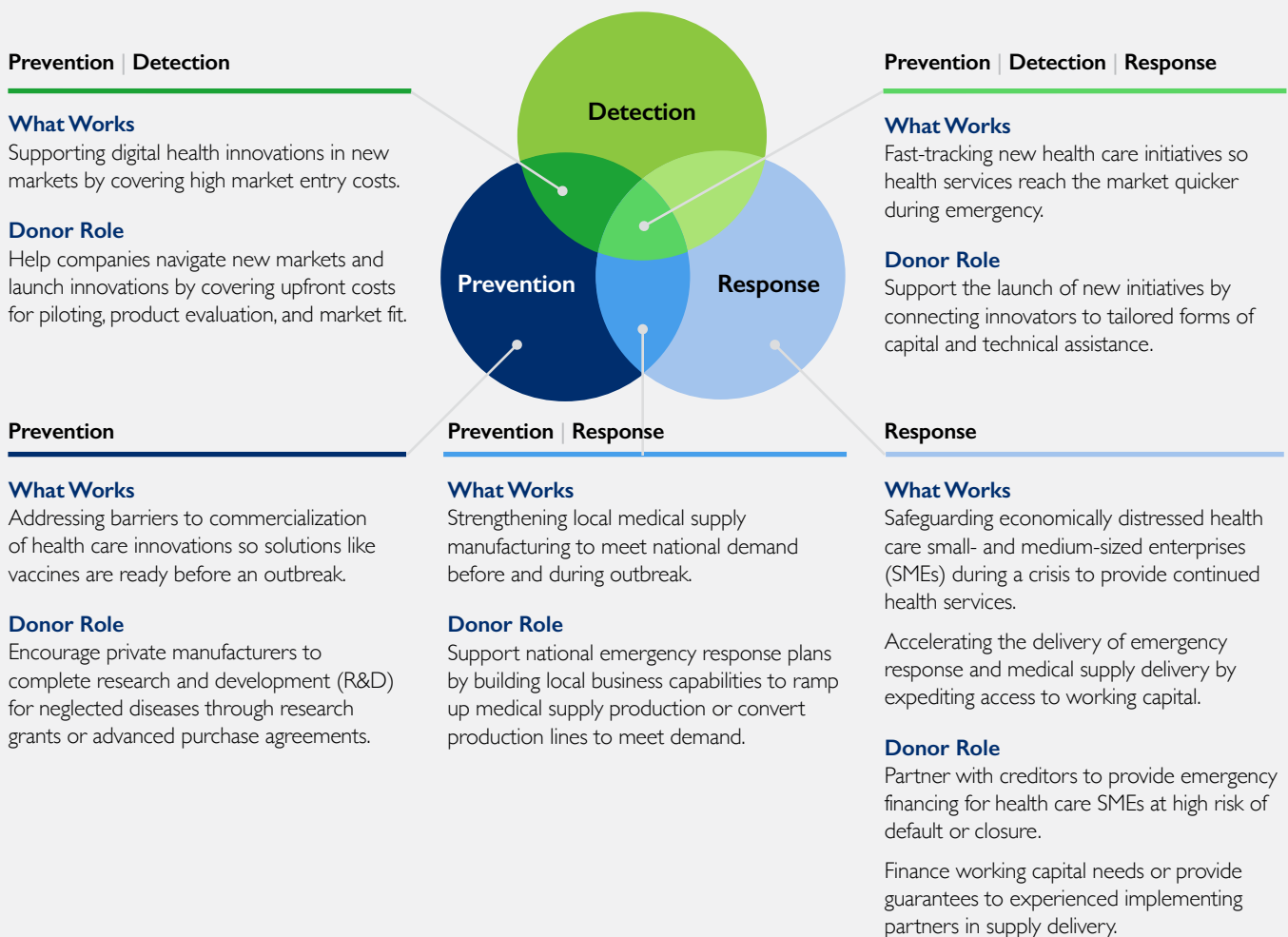
An estimated \$75 billion is needed in the next five years for global pandemic prevention, detection, and response.^{3,4} Insufficient funding has been allocated. In 2019, funding for this issue was only \$374 million.⁵ Moreover, the estimated funding gap to reach the 16 Sustainable Development Goals (SDGs) related to health targets in low- to middle-income countries (LMICs) was \$134 billion in 2016 and is expected to triple by 2030.⁶ With over \$229 trillion available in global capital markets, private sector investment can play a significant role in closing gaps in global health care funding.⁷

USAID and other donors can play a key role in mobilizing finance and catalyzing private sector engagement for addressing infectious diseases and strengthening health systems. Donors can foster incentives for public and private sector actors to collaborate and accelerate investments to support infectious disease prevention, detection, and response. Many areas of health care are managed by the public sector for policy reasons, while other areas are challenging to make commercially attractive, requiring ongoing public support. Yet private actors already provide leadership in the health sector and many more opportunities for private sector action and investment exist.

This Learning Brief synthesizes lessons that can inform USAID engagement in mobilizing finance around infectious disease prevention, detection, and response. USAID can support system strengthening to help meet infectious disease related challenges. This learning brief is one of three complementary documents including a [case study analysis](#) that illustrates various models for health finance and a [guidance note](#), which provides an overview of donor support for blended finance.

Key lessons demonstrate how donors can mobilize finance to address barriers related to infectious disease control while strengthening the system that underlies it. Key lessons were identified through secondary research, expert interviews, and case study analysis. While not exhaustive, these lessons present insights offered by case studies and the broader field of health finance. The lessons (outlined in Figure 1 and described in detail in Section IV of this report) extend across the three pillars of prevention, detection, and response. They showcase what has worked toward achieving them and donors' roles in that process.

FIGURE 1: MOBILIZING FINANCE FOR INFECTIOUS DISEASE PREVENTION, DETECTION, AND RESPONSE



I THE CHALLENGE: FINANCING NEEDS AROUND INFECTIOUS DISEASE

Infectious disease outbreak prevention, detection, and response, and long-term health system strengthening are critical for saving lives, improving access to basic services, and protecting the most vulnerable from disease. Prevention, detection, and response are the three pillars of USAID's Global Health Security framework. These aim to mitigate morbidity and mortality related to infectious disease and contribute to stronger health service delivery beyond moments of crisis.



Prevention: Adequate prevention measures, such as R&D and production, distribution, and administration of vaccines, are necessary to avoid infectious disease outbreaks.



Detection: Rapid detection and verification of potential health emergencies are critical for mitigating threats and saving lives. These efforts require surveillance, reporting, and communication networks to share news of outbreaks, perform risk assessments, and share expert advice.⁸



Response: Rapid, effective response is necessary to save lives once an infectious disease outbreak occurs. Such responses require skilled health care workforces, health system readiness, and access to personal protective equipment (PPE) and medications.⁹

The COVID-19 pandemic has exposed weaknesses in health systems across the globe and infectious disease outbreak prevention, detection, and response measures. Prior to COVID-19, health care systems were underfunded and understaffed. The pandemic has exacerbated these challenges. As of September 2021, more than 240 million cases of COVID-19 were confirmed, and 4.7 million related deaths have occurred worldwide.¹⁰

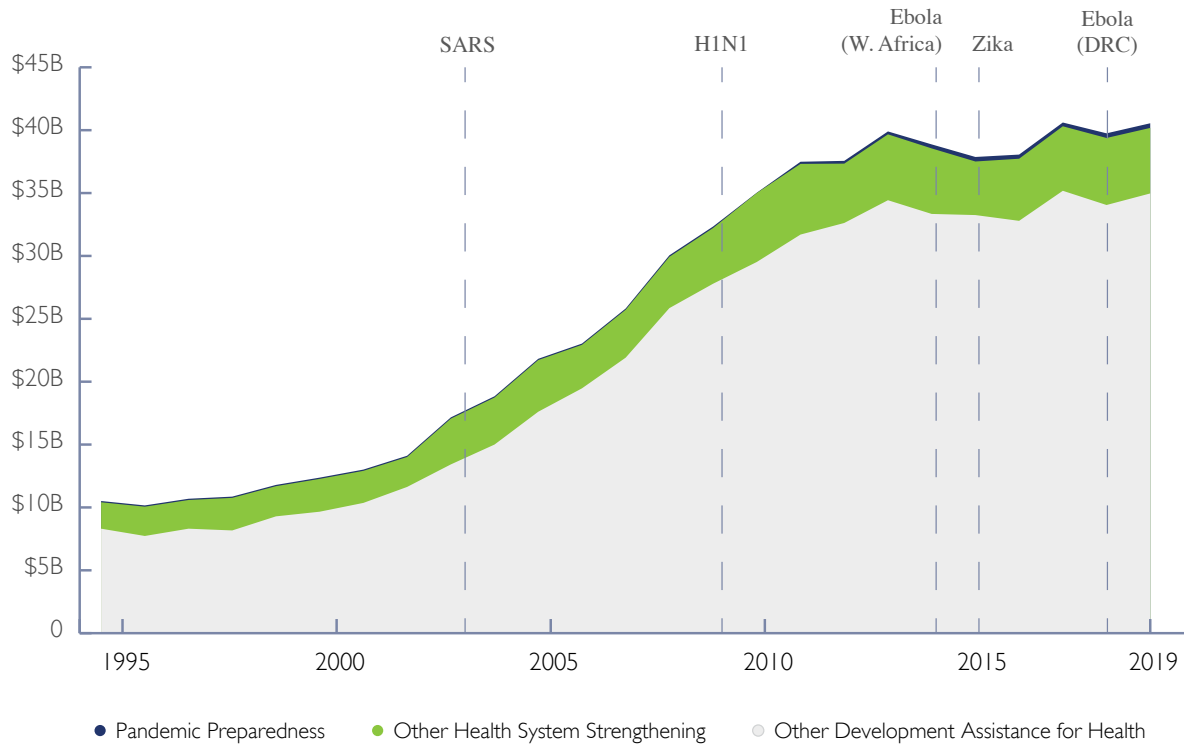
Global health has historically been underfunded.

Few countries have sufficient physicians, nurses, and hospital beds for their populations. This need is expected to grow.¹¹ The estimated funding gap to reach health SDGs in LMICs was \$134 billion in 2016. It is expected to triple by 2030.¹² By 2030, projections indicate that more than five billion people will lack access to essential health services. These include medical care, required medicines, and running water in hospitals. More than six million new nursing jobs will need to be created and filled.¹³

For more than a decade, funding for infectious disease research has been declining. Between 2000 and 2017, funders from G20 countries invested \$105 billion in infectious disease research.¹⁴ Annual investments have declined since 2007, while concerns about antimicrobial resistance and pathogens with pandemic potential have increased. Moreover, funding allocations do not correlate with the current level of disease burden or the level of risk from pathogens with pandemic potential. For example, Ebola virus research received \$1.2 billion (1.1 percent of infectious disease research funding) between 2000 and 2017. Coronavirus research received \$500 million (0.5 percent of funding) over the same period.¹⁵

Financing gaps impact prevention, detection, and response to infectious disease outbreaks. According to the G20 High-Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response,¹⁶ \$75 billion of global prevention, detection, and response funding will need to be raised over the next five years.¹⁷ In 2019, however, only \$374 million in global development assistance was dedicated to prevention, detection, and response in LMICs.¹⁸ Domestic budgets are also low. A mere 2.8 percent of OECD countries' domestic health spending is allocated to prevention, including public health and preparedness. A smaller fraction of this funding goes to disease detection and immunization.¹⁹

FIGURE 2:
PANDEMIC PREPAREDNESS REMAINS A SMALL PART OF GLOBAL HEALTH, EVEN FOLLOWING OUTBREAKS
 Global Development Assistance for Health and Pandemic Preparedness²⁰



Note: Dashed lines indicate the starting year of epidemics and the entry into force of the International Health Regulations, a binding agreement with rules on sharing critical information about epidemic threats and pandemic preparedness capacities.

Source: Institute for Health Metrics and Evaluation.

Recent funding for COVID-19 prevention, detection, and response has skyrocketed, but past responses to health crises indicate that funding spikes are seldom maintained. Since January 2020, \$42 billion has been disbursed for COVID-19 prevention, detection and response.^{21,22} Investments like these, however, tend to drop as the immediate health crisis ebbs. Following the Ebola outbreak, for example, epidemic and pandemic response increased significantly, to 16 percent of global health in 2015. By 2017, funding had decreased to seven percent. It is estimated that pandemic preparedness has made up just 0.9 percent of global development assistance for health (Figure 2).²³

Significant funding gaps remain in long-term health systems strengthening. USAID defined health systems strengthening as “the strategies, responses, and activities that are designed to sustainably improve country health system performance.”²⁴ The USAID Vision for Health System Strengthening 2030²⁵ considers three health system areas (primary, secondary, and tertiary health care) as critical to supporting effective infectious disease prevention and sustaining positive health outcomes during a crisis. However, development assistance for health system strengthening fell from 22 percent in 2003 to 14 percent in 2019.²⁶

II BLENDING FINANCE TO CREATE ADDITIONALITY AND HUMAN IMPACT

Catalyzing private sector investment often requires blending the resources of donor funding, philanthropic capital, and private capital. No one source has the resources or the necessary incentives to fully address existing financing gaps. The blending of resources redistributes risk to different parties in innovative ways. The public or philanthropic sector typically absorbs more risk to usher in private investment. Well-structured financing allows impact-oriented donors and private sector players to deploy capital alongside each other and reach goals not otherwise achievable.

Donors can help fill financing gaps by engaging in innovative models with the private sector that break down barriers to investing. Many areas of infectious disease prevention, detection, and response are not commercially attractive and require ongoing public support. However, opportunities for private sector action and investment do exist. For example, donors can help finance private sector-led research, development, and roll-out for vaccines in LMICs. Donors can work with governments, philanthropic capital, and private sector companies to blend funds for the building or renovating of high-cost health care infrastructure. Opportunities exist for donors to de-risk investments in digital health technologies or provide the working capital needed to reach market sustainability. Donors can also catalyze investment into local manufacturing and distribution of health and medical supplies to reduce dependency on imports. Further, donor support can leverage additional capital from multiple sources to address critical barriers. This role is evident during global health crises such as COVID-19, where such action can expedite innovations and bring them to market.

Donors such as USAID can use blended approaches to catalyze financing for health. Blended finance is a structuring approach that enables both donor and private capital to invest in parallel to achieve development outcomes.²⁷ Blended finance can act as one input to global health efforts by supporting response efforts and promoting market sustainability and self-reliance. Building on the [USAID Blended Finance Roadmap for Global Health](#), USAID has developed multiple blended finance options to mobilize funding to drive down risk and crowd in investment from

private, public, philanthropic, and other sources. This document provides new insight into specific examples where donors and other capital providers catalyzed private sector action. These cases demonstrate how blended finance can meet the needs for infectious disease prevention, detection and response, leading to strong additionality and human impact.

Figure 4 outlines blended finance approaches USAID and other donors use to mitigate risks that create incentives for private investors. Combatting infectious diseases and ensuring vulnerable populations have access to quality, basic primary health care may not represent a commercially viable private investment opportunity without some level of donor involvement. Within the health finance context – and as demonstrated in the case studies for this Learning Brief – these approaches to blending of public and philanthropic capital enable private sector responses to address a health need.

Investment Opportunity Assessments: Helps understand market conditions and identify funding needs and investment opportunities that support infectious disease response, and recovery efforts; they also provide understanding of needs for additional support and for maximizing the impact of donor efforts. These assessments commonly take place early in the design phase and assess a targeted range of priorities, such as gathering information on private, public, and philanthropic investors interested in the health-related market or particular response effort.

Structuring Funds and Financial Instruments: Offsets project preparation cost so execution can appeal to private, public, or philanthropic investors. This approach simultaneously reduces barriers to entry and supports mobilization of capital more efficiently for health needs. Activities include helping structure blended finance funds, investment platforms, and other health-focused financial products or financing to offset legal fees.

Catalytic Capital: Improves the risk/return profile for investors by absorbing risk or accepting concessionary returns for transactions with projected health outcomes. It creates concessions that can nurture nascent markets with unproven

models, particularly those serving low-income customers. USAID can support fund managers and projects with catalytic capital through subcontracts or grants, for example. It can also provide catalytic capital to fund managers to build first-loss capital into a health-focused investment fund.

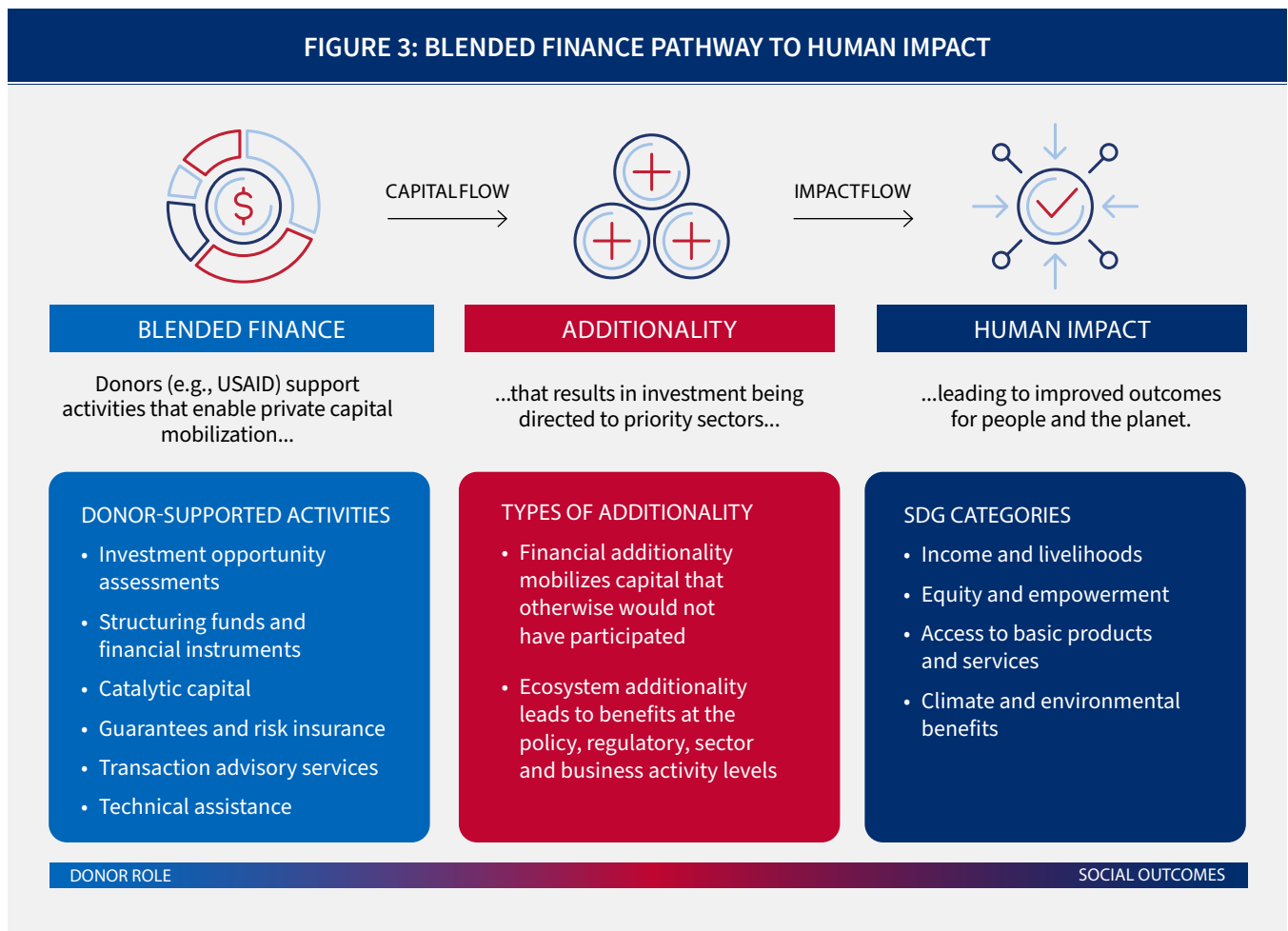
Guarantees and Risk Insurance: Provides credit enhancement and covers part or all of the risk if losses or default occur. This approach helps to crowd capital into health projects with higher risk levels, less-proven business models, or to unlock emergency response funds. It may also enhance issuers' credit ratings, enabling access to resources on better terms. Donors can provide guarantees or insurance at below-market terms, or launch risk-mitigation vehicles adapted to particular markets such as currency risk.

Transaction Advisory Services: Helps link capital suppliers to businesses or projects that need investment

to support infectious disease response and recovery and to strengthen related health systems. Activities such as investor matchmaking, pitch preparation, financial modelling, and deal structuring are used to help businesses become "investment ready" and raise funding.

Technical Assistance: Strengthens the commercial viability of a health-related business at pre- or post-investment stages, building strategic, technical or operational capacity. Donors may leverage technical assistance to support a priority geography, type of health support, or market segment. In addition, USAID may provide financial support to offset operational costs. This can help companies undertake research, development, and innovation in the health sector; or cover legal services to support government entities with private-public partnerships and concessions for infectious disease response.

FIGURE 3: BLENDED FINANCE PATHWAY TO HUMAN IMPACT



Additionality refers to a donor-supported blended finance intervention leading to effects that would not have occurred without the intervention.²⁸ Within the health sector, blended finance can create additionality when projects, products, or services that directly support infectious disease detection, prevention or response are too risky, costly, or complex for the private sector to pursue alone.

Financial additionality refers to situations where finance that would not otherwise have been provided is mobilized and an investment is made.²⁹ In other sectors, financial additionality is often measured as the ratio of donor resources to private capital mobilized for development outcomes. In the cases explored for this Learning Brief, donors such as USAID provided financial additionality when private companies could not continue self-financing or obtain other private investment to support a health outcome-related effort. In these cases, donor, philanthropic, and inter-governmental financing can be blended with private sector resources to achieve development impacts. Likewise, donor support can result in system-level impacts, or **ecosystem additionality**, that would not have occurred without a partnership between donors and private investors.³⁰ Examples in the case studies include the demonstration of a financing model and the development of a pipeline of investable opportunities leading to sector-wide growth.

FINANCIAL ADDITIONALITY

- **Innovative financial structures and instruments:** Provides financing in the form of innovative instruments with nontraditional terms and conditions (e.g., revenue based, movable asset-based collaterals) that lower the cost of capital for private investors and address risks associated with investing in unproven geographies or sectors.
- **Risk mitigation:** Provides financing unavailable in the market in ways that strengthens an investee's creditworthiness, financial soundness, or governance.
- **Resource mobilization:** Mobilizes financing from private investors, development finance institutions, or additional public or philanthropic sources that would otherwise not have invested.

ECOSYSTEM ADDITIONALITY

- **Demonstration effects:** Proves a concept or provides validation of innovative blended finance projects to incentivize replication at the fund or project level within or across sectors or regions.
- **Sector-wide growth:** Strengthens previously overlooked sectors or markets by building capabilities of businesses, funds, and intermediaries.
- **Policy or institutional change:** Enhances policy, institutional, or regulatory practices at the sector or country level.
- **Standard setting:** Improves policies that advance development finance, including procurement best practices and expertise in environmental, social, and governance standards.

Any private sector engagement strategy requires that donors consider whether support will create additionality and lead to desired development objectives, or human impact. Additionality provides a prime rationale for donor engagement. Without it, donors run the risk of wasting resources on transactions or projects that would have been equally successful without their involvement.

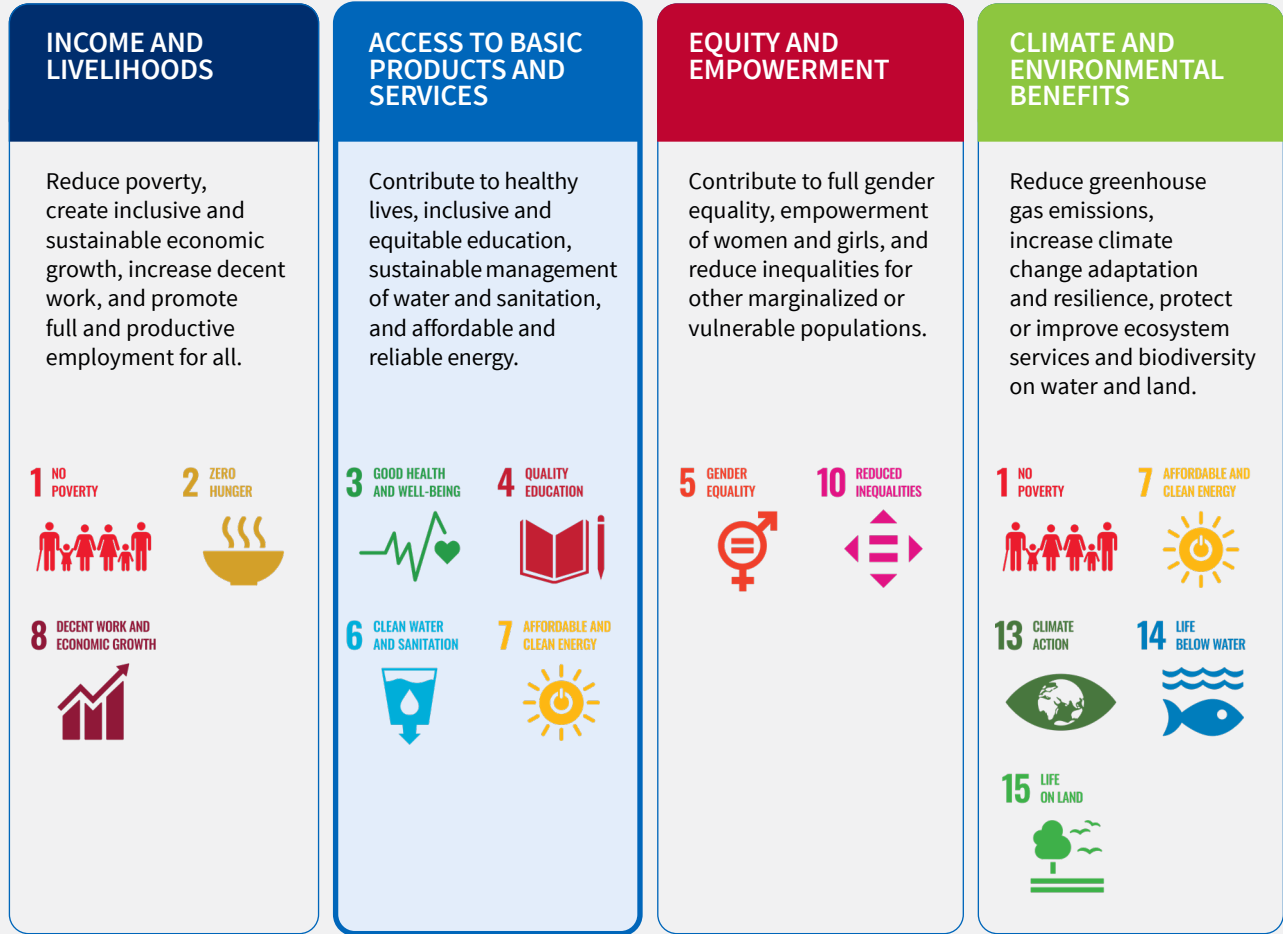
Deploying blended finance creates a pathway to additionality that ultimately leads to human impact, including positive health impacts. Figure 4, Human Impact Sustainable Development Goals, summarizes how donor-supported blended finance efforts produce additionality and contribute to achieving the SDGs.

Human impact is the long-term social outcome of blended finance, aligned to the SDGs and defined as positive outcomes created across different categories of multidimensional needs. For health-related activities, human impacts tend to fall into four key areas. The most common is Access to Basic Products and Services (marked in blue) and SDG 3, Good Health and Well-Being.

¹ Financial additionality is also described as occurring when private capital is invested in an entity that, without donor support, could not obtain financing from other sources on similar terms or quantities and for similar development purposes.

FIGURE 4: HUMAN IMPACT SUSTAINABLE DEVELOPMENT GOALS (SDGs)

HUMAN IMPACT - SDG CATEGORIES



III CASE STUDIES: MOBILIZING FINANCE FOR HEALTH

The five case studies analyzed for this Learning Brief provide examples of donor support that helped mobilize finance for health. They demonstrate how this support led to **additionality** and **human impact**. Three cases relate to COVID-19 response, one to Ebola vaccines, and one to digital health. Cases provide key lessons applicable to combatting infectious disease.

Two examples were selected to illustrate how donor-supported efforts created additionality and resulted in human impact.

These include:

- **Example 1:** MedAccess Guarantee—A financing model to expedite emergency COVID-19 response
- **Example 2:** Babyl—Blending donor grants and private investment to support digital health infrastructure

Lessons from all five case studies can be found in Section IV.

FIGURE 5: SUMMARY OF HEALTH FINANCE CASE STUDIES

CASE STUDY	LOCATION BLENDED FINANCE SUPPORT HEALTH FOCUS
<p>Global Ebola Vaccine Stockpile (2014) Goal: Increase access to Ebola vaccines for LMICs Donor role: Advance purchase commitments and grant funding to support vaccine development, manufacturing, and rollout</p>	<p>Global Guarantee/Risk Insurance Prevention</p>
<p>MedAccess COVID-19 Procurement Guarantee (2020) Goal: Secure lower prices and create a sustainable supply of medical products for Sub-Saharan Africa countries Donor role: Procurement guarantees from MedAccess and the Bill and Melinda Gates Foundation (BMGF) allowed UNICEF to provide prefinancing commitments to LMICs for COVID-19 supplies</p>	<p>Sub-Saharan Africa (SSA) and South Asia Guarantee/Risk Insurance Response</p>
<p>Open Doors African Private Health Care Initiative (ODAPHI) (2021) Goal: Provide emergency working capital to distressed private health care small- and medium-sized enterprises (SMEs) in Sub-Saharan Africa Donor role: Catalytic capital from President’s Malaria Initiative and loan guarantees from the U.S. International Development Finance Corporation (DFC) and foundations for Medical Credit Fund to provide emergency loans to health care SMEs</p>	<p>Ghana, Kenya, Nigeria, Tanzania, Uganda Guarantee/Risk Insurance Prevention, Response</p>
<p>Babyl Rwanda (2016) Goal: Develop proof of concept for digital solutions provided by private health care services that can support public health infrastructure Donor role: Support in covering pilot costs for Babyl Rwanda</p>	<p>Rwanda Technical Assistance Prevention, Detection</p>
<p>Sustainable Access to Markets & Resources for Innovative Delivery of Health Care (SAMRIDH) (2020) Goal: Provide emergency medical supplies for COVID-19 response and strengthened health care SMEs in India Donor role: USAID and foundations provided catalytic capital to mobilize debt and equity and fund transaction advisory services</p>	<p>India Catalytic Capital, Technical Assistance Prevention, Detection, Response</p>



Photo credit: USAID/Madagascar

CASE STUDY HIGHLIGHTS

EXAMPLE I: MedAccess Guarantee

“Volume guarantees are useful when the manufacturing challenge is a lack of visibility into the market, or fragmentation [that makes] reaching a particular volume for a lower price challenging, or if it’s a brand-new market.”

- Hafeez Ladha, MedAccess

Context: At the beginning of the COVID-19 pandemic, PPE and medical supplies were limited in Sub-Saharan Africa (SSA) and South Asia. This increased the likelihood of infections, morbidity, and mortality.

LMICs did not have available financing to purchase PPE and other urgently needed medical supplies. UNICEF, an experienced procurer of supplies for LMICs, had available funds in its Vaccine Independence Initiative (VII) Revolving Fund,³¹ but could only divert them for emergency COVID-19 response if repayment were to be guaranteed.

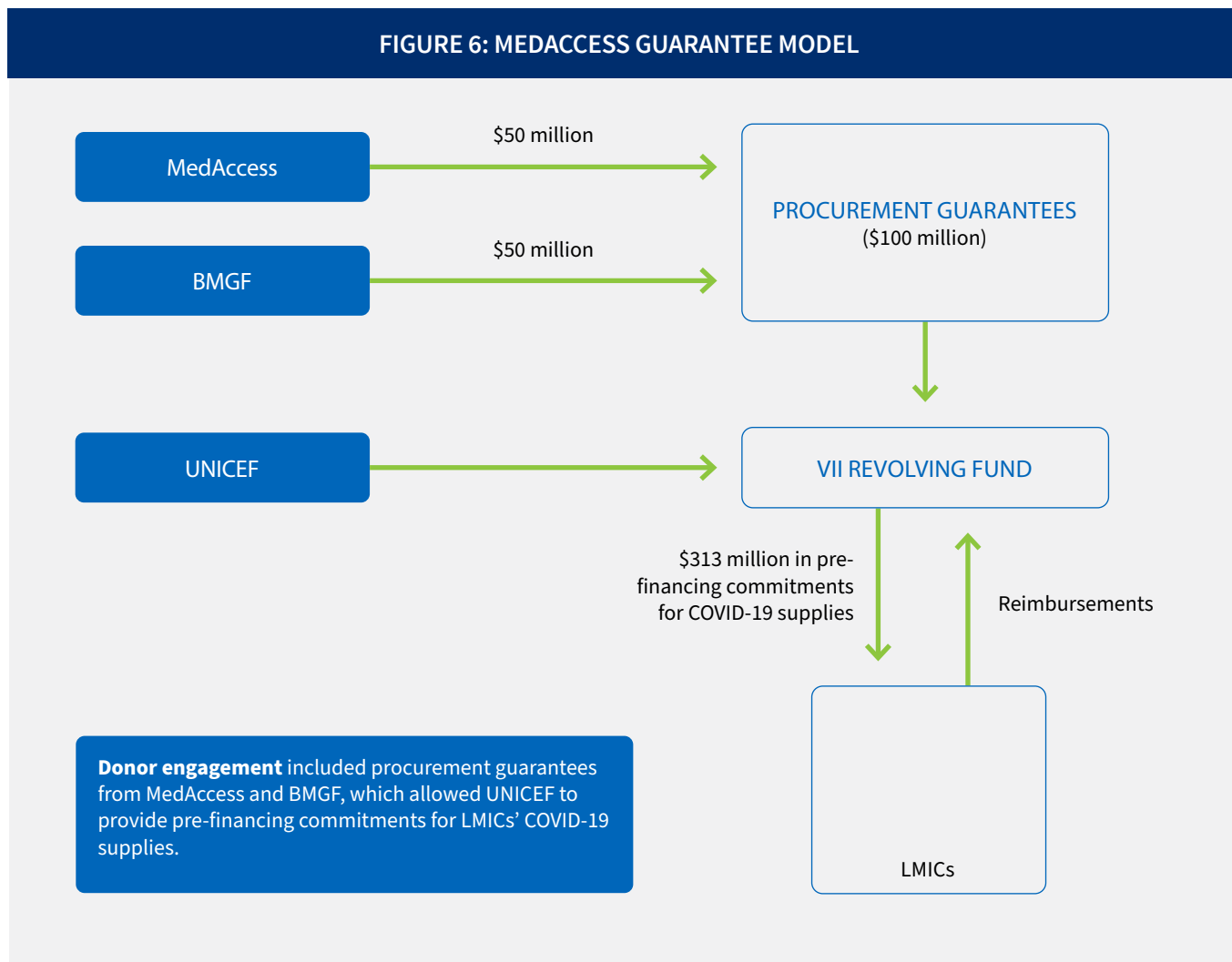
Donor role: Provide UNICEF with guarantees to unlock funds. MedAccess, a \$200 million subsidiary of the CDC Group and the BMGF, each provided UNICEF with \$50 million in guarantees. Secured with the combined \$100 million in procurement and volume guarantees, UNICEF tapped its VII Revolving Fund to provide 55 LMICs in South Asia and SSA with pre-financing commitments to purchase \$313 million worth of COVID-19 supplies.

Financial Additionality: Risk mitigation and resource mobilization. The guarantees from MedAccess and BMGF served to unlock UNICEF's VII Revolving Fund. This allowed UNICEF to support pre-financing \$313 million of COVID-19 supplies to 55 LMICs. If borrowers do not repay UNICEF, MedAccess and BMGF will do so, ensuring that VII funds would be restored.

Ecosystem Additionality: Sector-wide growth and expedited delivery. UNICEF's prefinancing commitments expedited PPE and medical supply availability by providing up-front capital for orders. LMICs urgently needed medical supplies, but many did not have financing available at the start

of the crisis to purchase them. Because of the intervention and collaboration between UNICEF, MedAccess, and BMGF availability of supplies was accelerated by up to six months.³²

Human Impact: Increased access to quality health supplies, reduced mortality, and morbidity. The project contributed to infectious disease outbreak response by increasing access to PPE, oxygen, test kits, and other medical supplies used to prevent, mitigate, and treat COVID-19. The efforts of MedAccess increased LMICs' access to and the affordability of essential medical equipment by locking in prices and volumes for over \$250 million in medical supplies to meet the crisis.³³



EXAMPLE 2: Babyl – Piloting and Validating Digital Health Care

“With the reduced burden on health centers and other medical institutions, our medical professionals will be able to spend more time and resources on the most serious medical cases, further increasing the quality of health care delivery across the country.”

- Dr Daniel Ngamije, Minister of Health in Rwanda

Context: Many regions in Rwanda have limited access to affordable primary health care services. Babyl, a provider of digital health care services, was piloting services in Rwanda to demonstrate market viability, but it needed additional funding to cover initial operating costs.

Donor role: Provide Babyl with a grant to support piloting costs and provide technical assistance to evaluate the viability of its business model. Babyl, a subsidiary of parent company Babylon, signed a service provision contract in 2018 with the Rwandan government. This pilot was co-financed by Babylon and by BMGF, which provided \$1.2 million in grant funding.³⁴ Additionally, USAID, through its Investment Support Program, provided a technical assistance grant for Babyl’s impact evaluation. The evaluation was critical for Babyl to secure a contract with the Government of Rwanda and access future funding. Once the model was proven, the Rwandan government signed a ten-year contract to expand services to all Rwandans over the age of 12 through the its community-based health insurance scheme, Mutuelle de Santé.³⁵

Financial Additionality: Risk mitigation and resource mobilization. Donor support helped mitigate risk and offset the cost of piloting Babyl, demonstrate market viability, and provided the evidence needed for the Government of Rwanda to commit public resources to contract with Babyl.

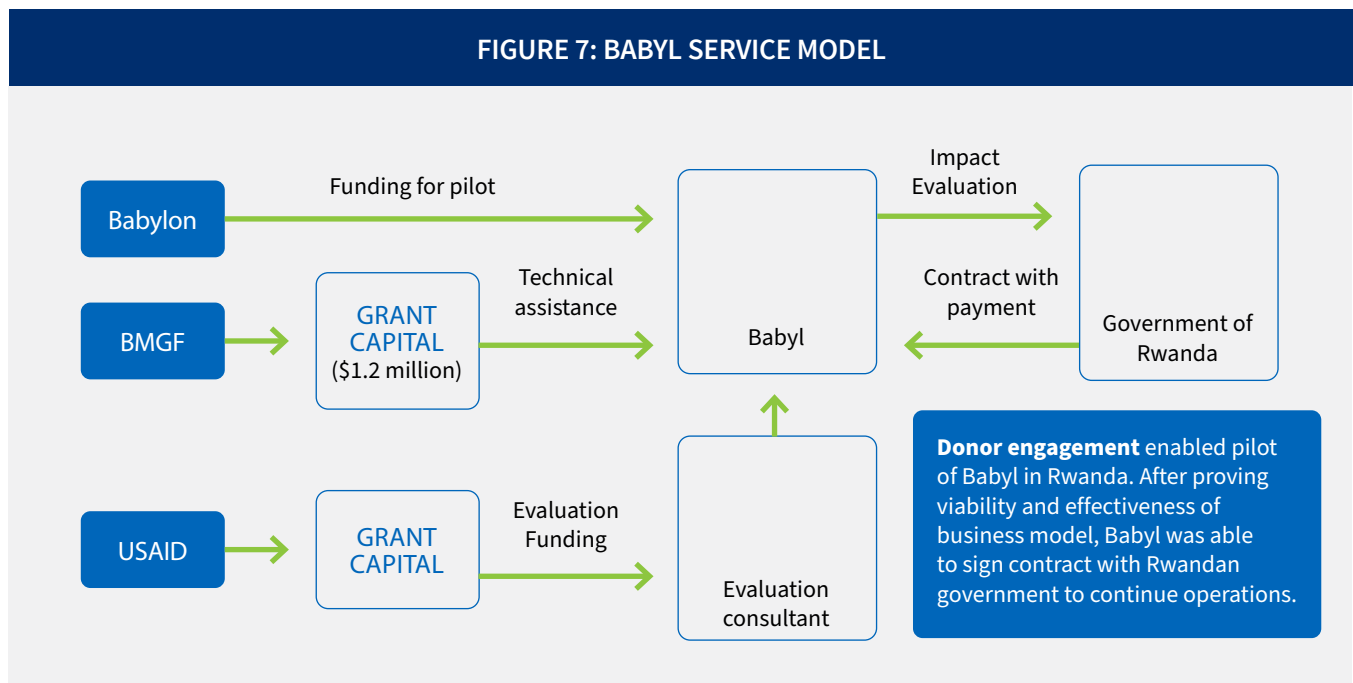
Ecosystem additionality: Demonstration effect and sector-wide growth. The Babyl experience demonstrates the efficacy of the financing model and contributes to the growth of digital health care, enabling Babyl to proceed with plans to expand universal primary health care throughout Africa.³⁶

Human Impact: Increased access to basic health care services throughout the country and increased employment opportunities. Digital technology can reduce burdens on health care systems and increase access to basic services. Making use of a digital platform allows for services to reach more people, especially in rural areas, without putting an extensive burden on the health care infrastructure.

Babyl’s digital solution has:

- Enabled patients to receive faster health care treatment and conduct fewer trips to health facilities. Via Babyl, patients are receiving prescriptions, lab requests, and referrals digitally. They benefit from reduced time and travel costs associated with accessing care.
- Over 30 percent of Rwanda’s adult population is now registered on Babyl.³⁷ To date, the digital service has enabled one million decentralized consultations at a rate of about 3,000 per day.
- Babyl has created 300 jobs in digital health and expects to continue employment and training opportunities in Rwanda.

FIGURE 7: BABYL SERVICE MODEL



IV KEY LESSONS FOR DONOR SUPPORT

Literature review, analysis of case studies, and interviews with donors and private sector actors provided lessons from the case studies considered in this brief. The research aimed to build an understanding of (i) various types of blended finance models; (ii) donor roles; (iii) impacts on health focus areas; and (iv) additionality and human impact. Interviews were conducted with experts from development banks, blended finance institutions, health care facilities, transaction assistance providers, and technical assistance providers.

The [five case studies](#) introduced in Section III (Figure 5, Summary of Health Finance Case Studies) provide five key lessons. They demonstrate how to maximize donor support to engage the private sector and reduce key barriers to infectious disease prevention, detection, and response.



Photo credit: NIAID

KEY LESSONS

Lesson #1

Incentivizing innovation by covering initial costs can support private sector actors to overcome constraints that deter investment needed to perform R&D for health innovations.

Health care innovations face many barriers to commercialization, including lengthy and expensive R&D processes, complicated approval pathways, and uncertain markets. Private investors often do not want to provide up-front capital because the risk of failure is high and returns may be long delayed. Health care innovators may need advance payment or additional financial support to offset commercialization risks and to complete R&D. This can lead to improved health outcomes by increasing availability of viable health products and services.

Donors can encourage private manufacturers to complete R&D for neglected diseases by providing guarantees to ensure payment for completed products. Donors can play an important role in addressing these constraints by providing funding up front to cover R&D costs or by agreeing to buy products from the manufacturer once they are commercialized. Donor engagement can be particularly successful when focused on under-researched health issues, such as neglected diseases, which tend to have limited end users with low ability to pay.

The Global Ebola Vaccine Stockpile was enabled by an advance purchase commitment (APC) from the vaccine alliance Gavi and grant funding from USAID to create an Ebola vaccine stockpile and strengthen health systems. Gavi used the APC to address the lack of a commercial market for Ebola vaccines. By ensuring payment, Gavi created time-saving additionality by creating incentives for private pharmaceuticals to fast-track R&D. USAID provided grants for the initial delivery of vaccines into the stockpile, and Gavi provided grants to strengthen health care infrastructure for vaccine rollout and to address Ebola outbreaks.

Donor support contributes to the accessibility and affordability of life-saving vaccines for neglected diseases. The APC enabled 350,000 people in Guinea during the 2018–2020 Ebola outbreaks to receive a vaccine that is 97 percent

effective. The stockpile will likely accumulate 500,000 doses over the next two to three years. Access will be open to any country with an outbreak and free for LMICs.

Private sector actors can support health infrastructure with digital solutions creating entry into new markets. Digital health solutions can fill gaps in health infrastructure by providing specialized solutions that support detection and prevention of infectious disease outbreaks. Private companies may find it challenging to pilot products in new markets, particularly those in LMICs, because of uncertain demand and initial low willingness to pay. Funding to meet the up-front costs of market entry to test new models can support the provision of basic health care services for communities in hard to reach areas. It may also lead to early detection of infectious disease outbreaks that help to mitigate spread.

Lesson #2

Donors can help companies navigate new markets and launch innovations that can fill gaps in public health systems by covering up-front costs for pilots.

Donors can play a role by funding up-front costs for market entry. This offers private companies a runway to test new models and find sustainable pricing structures. It can be successful when there is an opportunity to demonstrate that high-quality services from the private sector can fill a gap in public service provision and therefore qualify for public sector funding or subsidies.

Babyl received grant support from BMGF and parent company Babylon to cover piloting costs and provide Babyl with time to showcase impact potential. The funding covered a two-year pilot, creating additionality through demonstration effects. Babyl became Rwanda's first-of-its-kind digital solution. Following the USAID-funded impact evaluation of the two-year pilot, Babyl had enough evidence to enter negotiations with the Rwandan government to offer its services.

Following support that led to proof of concept, Babyl's digital solution is contributing to improved basic health services by providing decentralized access to consultations. These services support diagnosis and monitoring of health challenges, including infectious disease. More than 30 percent

of the adult population in Rwanda has registered on Babyl. The initiative has thus far delivered more than one million consultations, with doctors and nurses currently completing 3,000 consultations per day. In addition to strengthening the health care system, decentralized digital services reduce the risks of infectious disease transmission in clinics and hospitals.

Babyl's services intentionally support marginalized communities through feature-phone solutions, and locations throughout the country. Developing digital solutions using the feature-phone facility keeps the service affordable for low-income populations. Ensuring that Babyl "booths" are located throughout the country improves access in rural areas.

Lesson #3

Strengthening capabilities and providing financial support can demonstrate commercial viability and demystify health care initiatives for investors.

During the early stages of an initiative, health care organizations often require significant up-front capital to fund innovations and prove viability. However, private-sector investors often do not have the health expertise required to effectively perform due diligence and make investments. These initiatives need support and tailored funding to grow capabilities. They can lead to improved health outcomes by bringing new health care initiatives to the market and increasing service availability.

Donors can support the launch of new initiatives by strengthening capabilities and connecting innovators to tailored forms of capital. Donors can play an important role by providing services, such as technical assistance. These help health care entrepreneurs establish operations and demonstrate commercial viability. Donors can leverage their own credibility to attract private investment by matching investors with promising innovators and structuring tailored financial products. This can be particularly successful when donors partner with scientific organizations to support innovators and signal credibility to investors.

SAMRIDH received support from USAID and technical assistance from India's scientific community that helped de-risk the project for public and private investors. As a new initiative, SAMRIDH was an unknown player in India's blended finance and health care communities. As an anchor investor, USAID provided catalytic capital to SAMRIDH stakeholders, and India's

scientific community provided technical assistance, helping to establish SAMRIDH's legitimacy as a new organization and subsequently crowding in capital from other funders. USAID catalytic capital mobilized \$10 million in additional funds from other foundations.

SAMRIDH increases the accessibility and affordability of emergency critical care and medical supplies for more than 1,000 private health care SMEs in India. It plans to strengthen services and reduce out-of-pocket expenditure for the vulnerable 40 percent of India's population with high disease burdens (e.g., COVID-19 and other communicable diseases): as many as 15-20 million people. SAMRIDH intends to support at least 35 health care innovators to access affordable capital and operationalize their interventions. SAMRIDH intentionally funds health care programs that benefit women and marginalized populations.

Lesson #4

Providing working capital to health care SMEs that cannot take out loans supports continuity of operations during an infectious disease outbreak.

Many private health care SMEs, such as clinics, rely on revenue from patients' visits for basic services to continue operations. During a health crisis, particularly an infectious disease outbreak such as COVID-19, patients may not be willing to visit clinics for routine or specialized services to avoid proximity to infected patients. This jeopardizes clinic revenue and thus working capital, further hindering their ability to provide services and remain viable. Financial distress can make private health care SMEs ineligible for loans due to higher risk of default. They require support to improve eligibility and emergency funding to cover working capital needs. Addressing these requirements can lead to improved health outcomes because access to loans can enable health care companies to remain open and continue providing services, thus keeping health systems intact during the crisis.

Donors can partner with creditors to provide support for health care SMEs at high risk of default during a crisis. Donors can play a role by directly funding SMEs with capital or by partnering with creditors and providing loan guarantees to reduce or alleviate the risk of SME default. Donor engagement can be effective when multiple partners with different approaches but shared goals become involved. These partners can engage on different timelines, which may lead to faster fund disbursements.

The Open Doors African Private Health Care (in ODAPHI) Initiative provided loan guarantees for private health care SMEs in SSA that strengthened health systems and enabled continued operations. Various donors supported ODAPHI, including the President's Malaria Initiative (PMI), which provided catalytic capital. The U.S. International Development Finance Corporation (DFC), and the Rockefeller, Skoll, and MCJ Amelior Foundations provided loan guarantees. These guarantees were provided to the Medical Credit Fund (MCF), a creditor that provides loans to private health care SMEs in SSA. The loan guarantees created innovative financial structures that ensured that donors would cover 80 percent of the loans if borrowers defaulted, thereby reducing the risk for MCF and permitting loan disbursements. This initiative had demonstration effects as one of the first initiatives to address the economic crunch faced by private health care companies in SSA as a result of COVID-19. The program provided further additionality through its time savings. PMI's catalytic capital, as well as the Foundations' loan guarantees, enabled MCF to begin distributing funds up to nine months sooner than it would have with DFC support alone.

Due to donor and private support, ODAPHI increased access to basic services by enabling continuation of life-saving tests and treatments. The emergency loans are estimated to support continued operations for 1,600 health care SMEs. They can reduce morbidity and mortality, especially when related to undetected or untreated malaria. ODAPHI's support is expected to benefit marginalized communities throughout SSA. As a result of the emergency loans, each health care facility is expected to continue operations with an average of 3,200 patients served annually at each clinic. This will benefit the three million low-income patients, 2.4 million women, and 1.4 million children disproportionately at risk for malaria.

Lesson #5

Providing experienced implementing partners with expedited access to funding during an emergency can result in faster action than working with newer organizations. Unlocking funding for these partners can be particularly successful when operators have existing credit agreements that can be repurposed in times of emergency. Implementing organizations with

established processes, networks, and infrastructure can likely respond quickly in a crisis because they don't have to focus on the time-consuming logistics of new structures. These organizations may face financing constraints, such as strict covenants for earmarked funding, that hamper their ability to fund operations. As a result, they may require financial support to meet covenant requirements and access funding. During infectious disease outbreaks, this is particularly important because organizations fast response reduces the chance of disease spread.

Donors can accelerate emergency response and medical supply delivery by unlocking funds for implementing partners. Donors can play an important role by either directly funding operations or by providing guarantees so operators can access funds and bypass restrictive covenants. Donor engagement is particularly useful when implementing partners already have established lines of credit or funding and donor funds can be used to unlock this capital.

MedAccess and the BMGF provided procurement guarantees to UNICEF that supported pandemic response by accelerating the supply of COVID-19 PPE and medical equipment. Donors provided procurement and volume guarantees that mobilized resources by allowing UNICEF to redirect funding originally earmarked for vaccines to PPE and medical supplies procurement instead. Guarantees were appropriate because UNICEF needed to ensure funding would be repaid and available in the future for its original purpose of funding vaccines. UNICEF's prefinancing agreements for LMICs and donor support created additionality by accelerating PPE availability by four to six months in countries unable to provide up-front capital.

Due to donor support, UNICEF increased accessibility of PPE and medical supplies for LMICs. The procurement guarantee allowed UNICEF to ship LMICs \$313 million of COVID-19 supplies. Accelerating LMICs' access to essential medical equipment enabled earlier detection and mitigation of COVID-19. Many LMICs did not have funding available for PPE and needed quick access to supplies to protect health care workers and mitigate spread of COVID-19. This was important because health systems in LMICs were already vulnerable. This mechanism locked in prices and volumes for over 250 million supplies, including oxygen, respirators, and diagnostic tests for COVID-19 response.

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