



IFPMA

# Fighting for what counts:

Leveraging the power of collaboration to end  
HIV, tuberculosis, and malaria



## Acknowledgements

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For questions, please contact [communications@ifpma.org](mailto:communications@ifpma.org)

## About IFPMA

IFPMA represents the research-based pharmaceutical companies and associations across the globe. The research-based pharmaceutical industry's 2 million employees discover, develop, and deliver medicines and vaccines that improve the life of people worldwide. Based in Geneva, IFPMA has official relations with the United Nations and contributes industry expertise to help the global health community find solutions that improve global health.

For more information, visit [ifpma.org](http://ifpma.org)

September 2022

# Forewords



**Thomas Cueni**

IFPMA Director General

The COVID-19 pandemic has been a painful reminder of the shortcomings in our global health response and the fragility of national health systems, even in high-income countries. People living with chronic conditions or in countries disproportionately affected by infectious diseases like HIV, tuberculosis (TB), and malaria faced a new risk on top of pre-existing barriers in access to prevention, treatment, and care.

In recent months, global stakeholders have come together to reflect on the COVID-19 response – a key lesson learned being the power of innovation and partnership to drive life-saving solutions but also the need for more equitable rollout of pandemic vaccines, treatments, and diagnostics in future pandemics. Without further delay, we should re-commit to combining human ingenuity, strategic investments, and cross-sectoral partnerships as the recipe to achieve progress toward our goals to eliminate and control three of the deadliest diseases in the world – HIV, TB, and malaria.

From the development of new TB diagnostics to the first ever malaria vaccine launched in 2021, the biopharmaceutical industry has a longstanding and successful collaboration with the Global Fund. We fully support the Global Fund's ask for its Seventh Replenishment and its vision to get the world back on track to achieve the 2030 goals. Equally, we look forward to accelerating progress in the development of new vaccines and treatments, strengthening healthcare systems, and implementing innovative delivery solutions.

The Global Fund's investment case is mindful of the fact that we will not only have to recover lost progress in the elimination and control of HIV, TB, and malaria because of the pandemic. We will also have to fight new COVID-19 emerging variants and strengthen health



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and surveillance systems to respond to future health threats, like antimicrobial resistance (AMR) and new pandemics, while responding to the growing double burden of infectious and non-communicable diseases.

We will also have to face the threat of climate change – including exacerbated zoonotic spillovers, pandemic outbreaks, and a rising percentage of populations vulnerable to tropical and vector-borne diseases – and confront the indirect health threats of our zeitgeist, such as the food crises propelled by humanitarian conflicts, the economic and social impacts of the pandemic, and the inequities and health vulnerabilities such situations are bound to trigger.

This is too big a task for current tools, too costly a task for current investments, and too large a challenge for standalone action. This report showcases the multisectoral collaborations and innovation efforts of the biopharmaceutical industry with the aim of spurring all stakeholders to meet the financing needs of the Global Fund and to ensure all its partners can rally behind its vision to fight these deadly and pervasive health threats.



### Prof Sheila Tlou

Co-Chair of the Global HIV Prevention Coalition and Special Ambassador for African Leaders Malaria Alliance

The impacts of COVID-19 have been felt all over the world. Lives, livelihoods, and critical interventions have been affected in all countries. The African continent is no exception. While Africa has thankfully been spared the worst in terms of mortality and case numbers, the overall impact of the pandemic has been devastating to health and healthcare on the continent. Efforts taken to limit the spread of COVID-19 have significantly disrupted the fight against epidemics in Africa such as HIV, TB, and malaria. For instance, new HIV infections, rather than slowing down, increased from a target of 500,000 by 2020 to over 1.5 million in 2022.

Funding has shifted away from other priority areas to tackle COVID-19, and we are seeing the repercussions. The widespread impact of HIV, TB, and malaria,

combined with the impact of the COVID-19 pandemic, have been detrimental to advancements toward health and gender equity, economic progress, and food and agriculture security.

The uncertainty that the COVID-19 pandemic has brought has taught us just how interconnected we are and has emphasized the urgent need for integrated and collaborative health programs and responses. Tackling these diseases requires concerted efforts in critical areas. We need political commitment and investment to ensure health systems are resilient. In doing so, we can accelerate momentum toward achieving universal health care and consequently ensure health as a basic human right by reducing the burden of epidemics like HIV, TB, and malaria.

Now, more than ever, we need to band together, across a wide range of civil society and private actors, to accelerate the progress in prioritization, innovation, and resource mobilization to defeat these epidemics by 2030.



### Dr Kuldeep Singh Sachdeva

South East Asia Regional Director of the International Union Against Tuberculosis and Lung Disease

India accounts for over one fourth of the global TB disease burden. In the past decade, there have been incredible strides to reduce this burden in India and globally. We have witnessed impressive achievements, including increased access to TB preventive treatment and care, due in large part to multisectoral leadership and accountability.

However, COVID-19 diverted attention and resources away from TB, leading to the disruption of essential, life-saving TB services. In 2020, case notifications decreased by 25% and there was an estimated 13% increase in TB-related mortality compared to 2019 in India alone.

Yet, the fight to end TB by 2025, ahead of the 2030 global Sustainable Development Goals target, continues. With COVID-19 threatening to reverse our gains over the past decade, a committee under the Indian Minister of Health & Family Welfare developed a response plan that included integrating TB and COVID-19 into outreach, screening, and contact tracing. Within months of the creation of this response plan, the gap in TB treatment enrollment created by COVID-19 has already closed from a 25% decrease to only 12% below pre-pandemic levels.

With the Indian government, private sector, and other partners effectively working together to strengthen existing systems and improve the quality of care for those who suffer from TB, there is hope that lessons from this collaboration can be replicated around the world, and potentially be applied to other epidemics like malaria and HIV.

This report further illustrates how multisectoral collaborations and biopharmaceutical industry initiatives can positively transform health outcomes. There is so much we can accomplish by working together and integrating care within health systems.

As we move forward, we need to continue to galvanize global, regional, and national efforts, increasing investment and action to get back on track to end TB.



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# Introduction

Twenty years ago, the prospect of controlling and eliminating HIV, TB, and malaria was uncertain. Yet, since 2002, health investments through the Global Fund have managed to halve the total mortality of these three diseases, saving more than 44 million lives.

In 2019, building on the trust and success generated by its model, the Global Fund's Sixth Replenishment Conference raised a record US\$14.02 billion for the 2021-2023 period. This represented a record-setting recommitment to achieving toward the UN Sustainable Development Goal (SDG) 3 target of ending AIDS, TB, and malaria as public health threats by 2030.

This year, as we approach the Seventh Replenishment Conference for the Global Fund and in the midst of a devastating global pandemic, the Fund's US\$18 billion request remains an important investment to fight for what counts. While it represents a significant increase of 30% on the last replenishment at a time when finances are already stretched around the world, the urgent need to get HIV/AIDS, TB, and malaria programs back on track after the disruption caused by the pandemic, as well as to reinforce health systems strengthening and future pandemic preparedness, makes it justified.

## The world is facing a deadly backslide

Since 2019, and for the first time in the Global Fund's 20-year history, progress was lost in the fight against HIV, TB, and malaria. **This was largely due to the COVID-19 pandemic, which has overwhelmed health systems**, diverted human and financial resources, exacerbated inequalities, and disrupted control and elimination programs for the three diseases. This impact was most felt by low-resource countries, where the impact of COVID-19 on domestic resources fueled an increase in cases and mortality across these epidemics. The number of people receiving HIV treatment increased by only 1.47 million in 2021, the smallest increase since 2009.<sup>1</sup> In parallel, 2020 saw malaria incidence grow by 14 million cases, while in 2021 the number of people who died from TB increased for the first time in 15 years.<sup>2,3</sup> This backslide is further exacerbated by the increase in incidence and prevalence of these diseases in areas affected by humanitarian conflicts and crises.

## Leveraging pandemic response learnings to face current threats

The pandemic has heightened the urgency to reform the global health architecture for global preparedness and response, spotlighting the need for **greater investment in medical surveillance programs and resilient healthcare systems** that are able to endure current and future health emergencies.

Learnings<sup>4</sup> from the COVID-19 pandemic are pushing the international community to tackle global health challenges through a unified approach, breaking infrastructure and funding silos and better integrating non-communicable diseases (NCDs) and infectious disease programs within primary care.<sup>5</sup>

This was not lost on the Global Fund, which, in the aftermath of COVID-19, is expanding its remit to incorporate pandemic preparedness and response within its efforts to build and maintain resilient and sustainable healthcare systems for HIV, TB, and malaria. Taking up a third of the Global Fund's targeted budget (US\$6 billion), investments in lab and health systems components, surveillance networks, supply chains, and workforce capacity building have been leveraged by many countries to combat COVID-19. In fact, leveraging existing infrastructure and working with integrated solutions will be essential, together with additional investments in disease-specific tools and interventions, to re-gain lost ground and propel further action to achieve the 2030 targets for the three diseases.

## No stepping back but moving forward

Amidst wavering political commitment, shortfalls in funding, and decreased prioritization at both national and international levels, the Global Fund is calling on all actors — including multilateral and bilateral partners, governments, civil society, and the private sector — to “get the world back on track toward ending HIV, TB, and malaria, to build resilient and sustainable systems for health, and to strengthen pandemic preparedness, making the world more equitable and safer from future threats.”<sup>6</sup>



Collaboration and coordination with other existing and emerging global health financing mechanisms such as the G20 Financing Intermediary Fund (FIF) for pandemic preparedness is critical, and investments in the fight against HIV, TB, and malaria should not be seen as competing with pandemic preparedness and response for financial resources. Instead, the Global Fund's Seventh Replenishment investment case advocates for the deployment of catalytic funding toward health system strengthening to be able to ensure sustainable financing simultaneously and synergistically for HIV, TB, and malaria programs while better preparing for future pandemics.

The biopharmaceutical industry endorses this integrated and complementary approach and remains deeply committed to strengthening health systems worldwide and to supporting the fight against HIV, TB, and malaria in high-burdened areas and beyond. Standing alongside the global health community, the industry commits to build upon the hard lessons learned during the pandemic to:

- 1 — Continue to leverage the industry's unique role and expertise for global health security
- 2 — Foster and accelerate innovation across the healthcare ecosystem
- 3 — Collaborate to reinforce health systems and pandemic preparedness

## 1 —

### Continue to leverage the industry's unique role and expertise for global health security

Research and development, innovation of new medical products, and expertise for capacity-building are the cornerstones of the healthcare industry's role within the healthcare ecosystem. Our industry continues to invest in R&D for disease-specific tools and interventions, including diagnostics, vaccines, treatments, and prophylactics for HIV, TB, and malaria. This includes **mRNA technology**, to which the development process for COVID-19 vaccines has served as a proof-of-concept for its efficacy and potential use for other diseases. **Drug resistance to HIV, TB, and malaria products**, which remains a major challenge in the control and elimination of the three diseases, is another big focus of the industry's pipeline within wider efforts to tackle antimicrobial resistance (AMR). The industry is also focusing on innovations around administration, such as shorter treatment courses, which will improve adherence, and formulations such as those better tailored for pediatric use. Industry also contributes their expertise and skills to ensure innovations reach the front lines of healthcare systems through training of healthcare workers, support for patient groups, and wider community engagement.



**We can only achieve our vision of a malaria-free world through collective action. The Global Fund Seventh Replenishment is a unique opportunity to re-energize our commitment to investing in innovation and research to develop new tools and promote the appropriate use of existing ones. The RBM Partnership to End Malaria recognizes the biopharmaceutical industry as a critical partner to accelerating progress to end malaria.**

**Dr Corine Karema**  
Interim CEO of the Roll Back Malaria (RBM) Partnership

Yet, lack of funding for R&D on HIV, TB, and malaria remain a major bottleneck in reaching the 2030 targets within strategic plans against each of these infectious threats. Optimizing models for fast-tracking regulatory processes, aggregated demand creation, and advanced market commitments seen for the development, production, and distribution of COVID-19 vaccines could be decisive in attracting investments in the development of new medical products for HIV, TB, and malaria. By **creating market certainty and de-risking investments**, these solutions could be a gamechanger for the pipeline against these diseases.

## 2 —

### Foster and accelerate innovation across the healthcare ecosystem

Another major bottleneck in reaching the 2030 goals is ensuring that available life-saving products reach those who need them. That is why the industry is not only committed to innovation in **R&D**, but to systemic innovation, to make sure the entire healthcare ecosystem is fit-for-purpose and adapted to local and global needs. The inability to ensure the continuation of HIV, TB, and malaria control programs during the pandemic and the experiences of the COVID-19 response have heavily underscored the need to strengthen diagnostic and surveillance systems, integrate healthcare services across therapeutic areas, strengthen manufacturing capacity and supply chain resilience, and ensure robust access and delivery infrastructure at the local level.

For HIV, TB, malaria, and beyond, IFPMA member companies have long been actively engaged in increasing access to healthcare through innovative digital health solutions, awareness and educational campaigns, grassroots and community engagement projects, and capacity building programs in developing countries. These include Roche's project to improve diagnostic testing in Asia Pacific and Africa, Johnson & Johnson's youth-led initiative to reduce the rate of HIV infections in South Africa, or Sanofi's MOSKI Kit awareness program for the prevention, diagnosis, and management of malaria in Africa. Likewise, in collaboration with other health stakeholders, the industry has long been invested in the development

and implementation of licensing agreements, voluntary technology-transfer programs, and the scale-up of manufacturing capacity to accelerate access to HIV and TB diagnostics and treatments in low- and middle-income countries (LMICs).

These efforts underlie the industry's mission to ensure innovations reach all those in need and the belief that, only as a strong and collaborative global community, can we build a healthier, safer, and more equitable world.



**Investing in the Global Fund is one of the best investments that can be made to save lives and end the epidemics of HIV, malaria, and tuberculosis. Continued government and donor contributions are essential for supporting the continued manufacturing and delivery of quality-assured products to address the needs of patients at-risk and suffering from these diseases.**

**David Reddy**  
CEO of Medicines for Malaria Venture (MMV)

## 3 —

### Collaborate to reinforce health systems and pandemic preparedness

The industry is deeply committed to playing its role within global efforts toward the achievement of the 2030 SDGs for HIV, TB, and malaria as well as toward the goal of Universal Health Coverage (UHC). Yet, aspirations of a fit-for-purpose, strong healthcare ecosystem fall far from what every stakeholder can accomplish on its own. The COVID-19 pandemic saw a rise of **cross- and intra-sectoral collaborations, public-private partnerships, and sustainable financing solutions** to ensure a faster response across the healthcare continuum. Partnerships such as the Medicines for Malaria Venture, the TB Alliance, or the Global Fund itself were already capitalizing on such

an approach and should continue to be supported, expanded, and replicated.

The pandemic also highlighted the need to reform the global health architecture and approach global health threats through multilateral action. As a representative of the biopharmaceutical industry, IFPMA is involved in high-level discussions with stakeholders such as the WHO, the G7, and the G20, to create better mechanisms for pandemic preparedness and response, to ensure equitable access in pandemics such as the proposed Berlin Declaration to ensure equitable access in pandemics, but also to accelerate collective action across global health matters.<sup>7</sup>

In parallel to these efforts, the industry is equally mindful of the need to translate these conversations into regional and local action. With Africa being one of the highest-burdened continents affected by HIV, TB, and malaria, investing in country capacity, resilience, and preparedness can have widespread benefits with returns across multiple disease areas. In that sense, IFPMA's advocacy efforts for the operationalization of the **African Medicines Agency** to increase the continent's self-reliance in regulatory approvals, R&D, production, and distribution of medicines also hope to make a meaningful impact in the fight against HIV, TB, malaria, and beyond.



**More than investment is needed to beat the three diseases. The biopharmaceutical industry is uniquely positioned to accelerate progress against HIV, TB, and malaria, bringing to the table product innovations, advocacy, and value chain solutions. While the industry plays a major role in bringing forward solutions, it is through enabling ecosystems, and especially strategic partnerships and collaborations, that these high-impact solutions will reach scale.**

**Yacine Djibo**  
Executive Director of Speak Up Africa



## Impact of COVID-19 across disease metrics

	 HIV <sup>ii</sup>	 TB <sup>iii</sup>	 Malaria <sup>ii,iv,v</sup>
Newly reported cases	→ <b>0%</b> 1.5 million in 2020 to 1.5 million in 2021*	↓ <b>-18%</b> 7.1 million in 2019 to 5.8 million in 2020	↑ <b>+6%</b> 227 million in 2019 to 241 million in 2020
Deaths	↓ <b>-5.8%</b> 690,000 in 2020 to 650,000 in 2021	↑ <b>+8.3%</b> 1.2 million in 2019 to 1.3 million in 2020	↑ <b>+53%</b> 409,000 in 2019 to 627,000 in 2020
Testing	↓ <b>-22.4%</b> 134 million in 2019 to 104 million in 2020	↑ <b>+10%</b> 61% (2.2/3.6 million) in 2019 to 71% (2.1/3.0 million) in 2020 of people diagnosed with bacteriologically confirmed pulmonary TB were tested for rifampicin resistance	↓ <b>-4.3%</b> 259 million in 2019 to 248 million in 2020
Treatment	↑ <b>+5.5%</b> 27.2 million in 2020 to 28.7 million in 2021 of people living with HIV accessing ART	↓ <b>-21%</b> 3.6 million in 2019 to 2.8 million in 2020 of people accessing TB preventive treatment  ↓ <b>-15%</b> 177 million in 2019 to 150 million in 2020 of people provided with treatment for drug-resistant TB	↓ <b>-9.5%</b> 253 million in 2019 to 229 million in 2020 of manufacturer-delivered insecticide treated nets (ITNs)  ↑ <b>+57%</b> 21 million in 2019 to 33 million in 2020 of children treated with at least one dose of Seasonal Malaria Chemoprevention (SMC)
Funding	↓ <b>-0.9%</b> US\$ 21.6 billion in 2020 to US\$ 21.4 billion in 2021	↓ <b>-8.7%</b> US\$ 5.8 billion in 2019 to US\$ 5.3 billion in 2020	↑ <b>+10%</b> US\$ 3.0 billion in 2019 to US\$ 3.3 billion in 2020

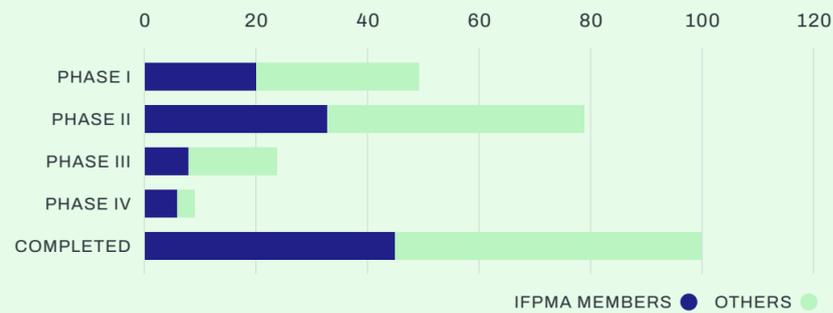
The exemplary case studies in this report aim to illustrate the widespread and diverse contributions of the biopharmaceutical industry in advancing progress in the fights against HIV, TB, and malaria, which are caused by completely different pathogens – a virus, a bacterium, and a parasite, respectively. They require tailored approaches, not just for the development of drugs and vaccines, but also for prevention and control programs. Offering just a glance of the myriad of ongoing initiatives across the industry, these cases illustrate that healthcare companies are not only focused on the development of innovative products, but also on the strengthening of health systems, services, and workforce that are needed to deliver those products.

We can get the world back on track toward achieving SDG 3.3 for HIV, TB, and malaria while building resilient and sustainable systems for health. Such a feat, as many of our projects below attest to, requires cross-sectoral collaborations to be impactful and transformative. We invite all actors to explore our work and engage with us in deepening the quality and impact of our programs.

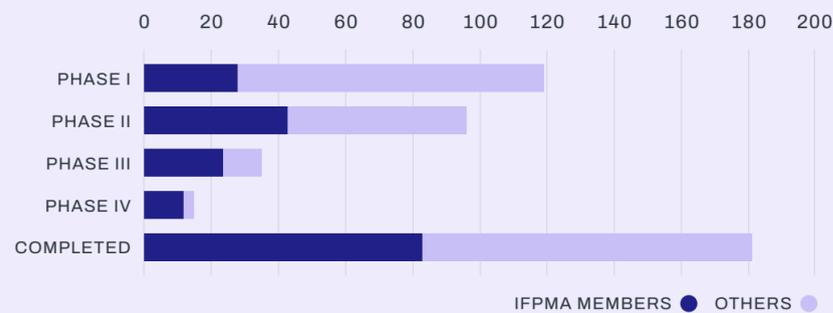
<sup>i</sup>UNAIDS Factsheet 2022, <sup>ii</sup>The Global Fund Report 2021, <sup>iii</sup>WHO TB Report 2021, <sup>iv</sup>WHO Malaria Report 2020, <sup>v</sup>WHO Malaria Report 2021  
\*Newly reported HIV cases have been on a steady decline since the late 1990s, and the impact of COVID-19 has seen this declining trend having slowed down, thus reverting progress achieved.

## 1 — Continue to leverage the industry's unique role and expertise for global health security

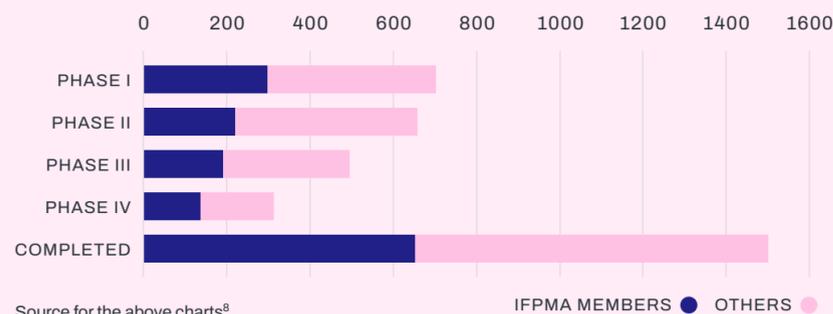
**261** R&D projects on TB



**446** R&D projects on Malaria



**3,671** R&D projects on HIV/AIDS



Source for the above charts<sup>8</sup>

IFPMA MEMBERS ● OTHERS ●

## 2 — Foster and accelerate innovation across the healthcare ecosystem

Explore the full range of programs at [globalhealthprogress.org](http://globalhealthprogress.org)

OUR PROGRAMS SUPPORT COUNTRIES BEYOND MEDICINES DEVELOPMENT. TOP STRATEGIES ARE:

- Drug Development and Research**  
41 programs
- Community Awareness and Linkage to Care**  
24 programs
- Health Service Delivery – Prevention**  
21 programs

**Health Systems Strengthening**  
18 programs

- Health Service Delivery – Treatment**  
15 programs
- Health Service Delivery – Diagnosis**  
10 programs
- Health Service Delivery – Screening**  
8 programs

## 3 — Collaborate to reinforce health systems and pandemic preparedness

GLOBAL HEALTH PROGRESS SHOWCASES:

**97** collaborations that support HIV, TB, and malaria  
(compared to 76 in 2019, a 28% increase)

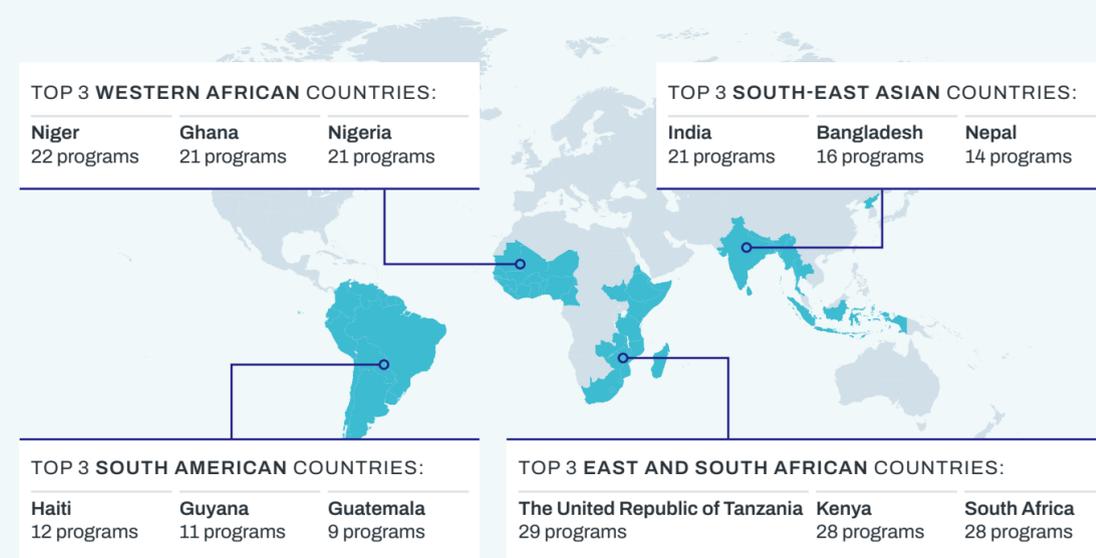
OUR COLLABORATIONS ARE WORKING IN:

**142** countries around the world

OUR PROGRAMS ARE COLLABORATING WITH:

**566** multi-sector partners

### Our programs are working across the globe



## Our programs adopt holistic approaches to supporting countries and the SDGs beyond health

- 47% (39/97)** of our programs in HIV, TB, and malaria support **SDG 5** (gender equality and women's empowerment)
- 42% (41/97)** of our programs in HIV, TB, and malaria support **SDG 10** (reduce inequalities)
- 51% (49/97)** of our programs in HIV, TB, and malaria support **SDG 9** (industry innovation & infrastructure)
- 100% (97/97)** of our programs in HIV, TB, and malaria support **SDG 3** (Good Health and Wellbeing) & **SDG 17** (Partnerships for the Goals)

## We are working with partners across sectors to develop our HIV, TB, and malaria programs

**27%** (26/97, compared to 24% in 2019) of our collaborations are multi-company programs

**84%** (81/97, compared to 71% in 2019) of our programs include collaboration with more than one partner type

## Our industry works with a diversity of partners

PARTNER TYPE	% OF PROGRAMS COLLABORATING WITH PARTNER TYPE	PROGRAM TOTAL
Governments	47%	46 out of 97
Global NGOs	42%	41 out of 97
Academia or research institutes	37%	36 out of 97
Private foundations	29%	28 out of 97
Intergovernmental organizations and multilaterals	27%	26 out of 97
Local NGOs	17%	16 out of 97
Bilateral development organizations	15%	15 out of 97

OUR MOST COMMON PARTNERS ARE:

<b>Global NGOs</b>	Bill & Melinda Gates Foundation   15 programs Clinton Health Access Initiative (CHAI)   8 programs
<b>Bilateral Organizations</b>	US Agency for International Development (USAID)   10 programs US Presidents Emergency Plan for AIDS Relief (PEPFAR)   8 programs
<b>Governments</b>	US National Institutes of Health   10 programs
<b>Product development partnerships</b>	Medicines for Malaria Venture (MMV)   8 programs
<b>Intergovernmental Organizations and Multilaterals</b>	Unitaid   7 programs The Global Fund   6 programs

## The key role of diagnostics

HIV, TB, and malaria communities have long been aware of the role of strong diagnostic systems in resilient healthcare systems. The COVID-19 pandemic further stressed this need and highlighted the importance of building and optimizing a strong surveillance and monitoring system worldwide to be able to prevent the spread of infectious diseases and respond to the evolving nature of pathogenic threats. Strengthening the diagnostics infrastructure of developing countries is key in the fight against HIV, TB, and malaria and constitutes a key transversal investment for pandemic preparedness. Indeed, HIV testing infrastructure built by PEPFAR, the Global Fund, and other global health stakeholders was leveraged to support COVID-19 testing programs, providing a fast and effective response during the pandemic. Demonstrating its beneficial and sustainable nature, these investments should now be expanded to address the burden of other infectious diseases such as TB, for which testing and case reporting remain key challenges in its control and elimination.



**COVID-19 has bulldozed TB, HIV, and malaria in a big way. It is time to attract funds toward fruitful community engagement, mobilize players to build capacity for disease control interventions, develop disease awareness with an emphasis on pre-test counselling, and create community spokespeople for early case detection to cut the chain of transmission.**

**Prabha Mahesh**

TB Champion and Director of Projects at ALERT INDIA

## Roche Global Access Program

ACTIVE SINCE: 2014

Roche's Global Access Program contributes to the fight against high-burden infectious diseases by building healthcare capacity and increasing access to quality diagnostics in LMICs.



### PROGRAM OVERVIEW

Diagnostics are central for guiding medical treatments and for effective health care. Despite this, about half of the world's population have little or no access to basic diagnostics.<sup>9</sup> Low and lower-middle income countries (LMICs), representing over 40% of the world's population, with their large proportion of poor and rural populations, combined with their high burden of infectious diseases, are particularly affected. Roche's Global Access Program is working in resource-limited regions to build reliable diagnostic networks by eliminating barriers such as limited testing infrastructure, lack of disease awareness, and shortages of trained health workers. The program includes a range of initiatives aiming to build healthcare capacity and increase access to diagnostics for HIV/AIDS as well as TB, Hepatitis, HPV/Cervical Cancer, and COVID-19. The program also seeks to promote the early diagnosis of infants at risk of HIV. Building health infrastructure to increase access to diagnosis and linking it to treatment services for improved disease management, the program reaffirms Roche's commitment to meet the WHO's 2030 elimination goals.

### RESULTS AND MILESTONES

- In 2021, over 8 million people in Africa used Roche's viral load testing to manage their HIV infection and, to date, over 11 million babies have been tested for HIV with Roche tests.
- From 2015 to 2021, program educators trained over 8300 laboratory professionals, covering 103 training courses and workshops, across 18 countries.



**STRATEGY:**  
Health Systems Strengthening



**SCOPE:**  
LMICs



**TARGET POPULATION:**  
Children, Youth, Women, Men, People with low incomes, Marginalized/indigenous people, Rural populations

### SUPPORTING PARTNERS (3 OF 16):

- Clinton Health Access Initiative (CHAI)
- UNICEF
- Center for Disease Control and Prevention (CDC)

See [Global Health Progress](#) for the full program overview.

## Healthcare workforce – the backbone of resilient healthcare systems

A health system is only as strong as the people working within it. Yet, there is a global shortage of health workers, particularly affecting Southeast Asia and Africa, and a soaring need to bridge existing gender inequities and increase health financing for the recruitment, development, training, and retention of the health workforce. Indeed, the Global Strategy on Human Resources for Health: Workforce 2030<sup>10</sup> recognizes the need to protect, safeguard, and invest in health and care workers as a requirement for the strengthening of healthcare systems and accelerating progress toward Universal Health Coverage (UHC). The crucial role of resilient primary healthcare systems, and by extension, of frontline and community healthcare workers delivering those services, was made abundantly clear during the COVID-19 pandemic, where, despite stress, exposure, and lack of resources, healthcare workers all over the world courageously maintained essential health services

and provided care to those in need. As we work to re-build health systems to be more resilient during health emergencies, investing in community health workers as the first and often only link between communities and health systems is a sound and necessary investment in our path to achieving the UN SDGs.



**A multisectoral effort is critical for tackling major global health challenges like malaria, tuberculosis, and HIV. Strong private sector partnerships play an important part in accelerating health systems change and advancing health equity. PATH will continue to build these relationships as part of our commitment to supporting the Global Fund's movement for a healthier future.**

**Jeff Bernson**

Chief Programs and Innovation Officer of PATH

## Africa Frontline First Catalytic Fund (AFF-CF)



ACTIVE SINCE: 2022

The Africa Frontline First Catalytic Fund aims to create an expanded and institutionalized workforce of community health workers across 10 countries in Africa by 2030.

### PROGRAM OVERVIEW

More than 85% of community health workers in Africa, the majority of whom are women, are not paid for their work. Experience shows that professional community health workers – who are paid, trained, and supervised – are best equipped to provide essential health services in their communities. Investing in community health workers can generate a return of up to 10:1 when considering the improved economic, health, and social outcomes of community health workers.

The Africa Frontline First Initiative Catalytic Fund seeks to mobilize at least US\$100 million to accelerate the scale up of community health services in up to 10 African countries, with the Johnson & Johnson Foundation and the Skoll Foundation having pledged US\$25 million to the AFF-CF. The Catalytic Fund will combine coordinated technical assistance and implementation funding, as well as investments to scale financing, employ digital tools, increase the availability of essential life-saving commodities, and better integrate community health workers within the overall health system.

This catalytic investment is a first step toward a broader shared ambition to scale community health, contributing to expanding universal health coverage and to the African Union's New Public Health Order target of deploying 2 million community health workers by 2030.



**STRATEGY:**  
Health Systems Strengthening, Financing



**SCOPE:**  
Africa

### SUPPORTING PARTNERS (2 OF 3):

- Global Fund to Fight AIDS, Tuberculosis and Malaria
- Skoll Foundation

See [Global Health Progress](#) for the full program overview.

# HIV



Incredible efforts over the past four decades have significantly reduced AIDS-related mortality and the rate of new HIV infections, and transformed HIV from being an untreatable and almost uniformly fatal virus into a manageable, chronic condition. But substantial new investments are required to halt the 2 million new infections that are still recorded every year, and to achieve the targets of preventing 1.7 million AIDS-related deaths by 2030.

June 5th, 2021 marked the 40th anniversary of the first officially reported cases of HIV. More than 32 million people have died from HIV-related illnesses across the globe since. Following the mortality peak in 2004, AIDS-related deaths have been steadily decreasing.<sup>11</sup> However, approximately 2 million people become newly infected with HIV every year, disproportionately affecting women and girls due to the sociocultural, economic, and political inequalities they experience.<sup>12</sup>

At the 76th United Nations General Assembly in 2021, world leaders committed to reduce the annual number of new HIV infections to under 370,000 and AIDS-related deaths to 250,000 globally; eliminate new HIV infections among children; and provide quality life-saving HIV treatment to 34 million people by 2025. Yet, 2021 saw the lowest decrease in HIV infections since 2016 and the increase in the number of people on HIV treatment was the slowest in over a decade,<sup>13</sup> suggesting more still needs to be done.



**There are still many missed opportunities to streamline and amplify our actions for populations that continue to be left behind, such as adolescent girls and young women in their respective diversities. Partnerships are critical for maximizing investment in initiatives that address these challenges.**

**Martha Clara Nakato**  
HIV advocate and former HER Voice Fund Ambassador

## The success of advanced prevention and treatment

Global efforts such as the WHO’s “treat all” guidance and the UNAIDS “95-95-95” strategy have significantly increased the number of people who 1) know their HIV status, 2) are on antiretroviral therapy (ART), and 3) are on ART and have viral suppression.<sup>14</sup>

The healthcare industry has been a key player in the fight against HIV through the development of early-diagnostic tools, continued improvements to ART – including treatments with fewer side effects and combinations that improve adherence, and pre-exposure prophylaxis medicines (PrEP) to help prevent transmission of HIV, all of which have helped to transform HIV into a manageable chronic disease.<sup>15</sup>

These breakthroughs have not only reduced the burden on those living with HIV but have also been successful in decreasing the incidence of infection, shifting the approach in tackling the HIV epidemic from reactive to preventive. Today, there are more than 30 ART medications across seven distinct mechanisms of action and effective at different stages of HIV that have been approved for the market<sup>16</sup> and our companies are continuing to improve access through different innovative approaches.

A recent example is ViiV Healthcare’s voluntary licensing agreement with the UN-backed Medicines Patent Pool to expand access to its long-acting pre-exposure HIV treatment, cabotegravir, recently recommended by the WHO as part of a comprehensive approach to HIV prevention.<sup>17,18</sup>

The roll-out of affordable and quality medicines is estimated to have averted 16.2 million deaths since 2001 and has significantly increased access to treatment. Today, over 85% of women and girls globally have had access to ART to prevent mother-to-child transmission (MTCT),<sup>19</sup> while the implementation of Early Infant Diagnosis (EID) programs has resulted in over 5.5 million babies being born HIV-free.

## Still a long way to go – the 2030 targets

The fight against HIV needs to draw on existing strategies for prevention and treatment, as well as continued innovation, to reach vulnerable communities. If the international community reaches the 2030 targets, 3.6 million new HIV infections and 1.7 million AIDS-related deaths will be prevented by 2030. To continue the momentum and regain the ground lost due to COVID-19, scaling up and expanding successful programs to prevent, test, treat, and keep HIV patients immune-suppressed needs to be a priority.

The biopharmaceutical industry is continuing to invest in R&D to discover and improve upon novel treatments and HIV vaccines, which could stop the spread of HIV by teaching the immune systems of healthy people how to fight it off before they are exposed.<sup>20</sup> Additionally, IFPMA member companies support and spearhead initiatives to make existing innovations more accessible to people, including through voluntary licensing agreements for HIV medicines, but also

through community engagement approaches linking individuals to care, increasing earlier uptake of HIV testing, supporting retention in care, and increasing treatment adherence. These community-based programs serve as a platform to combat stigma as an access barrier to HIV prevention and treatment services through community-led mentorship and education programs.

Alongside these contributions to achieving the 95-95-95 targets, IFPMA members are also making strides in finding integrated solutions and leveraging HIV health platforms to sustain HIV gains while responding to COVID-19 and other infectious disease threats. One of these initiatives is Roche’s Global Access Program, which expanded its program beyond HIV to include Mycobacterium tuberculosis (MTB), Hepatitis B and C (HBV and HCV), and Human Papillomavirus (HPV) in countries where the disease burden is highest.<sup>21</sup> In our commitment in the fight against HIV, we will continue to work across the disease spectrum to protect hard-won gains and trailblaze new solutions to meet the 2030 goals for HIV/AIDS.

### SPOTLIGHT ON:

# 5/51 HIV programs in this report

Explore the full range of programs at [globalhealthprogress.org](https://globalhealthprogress.org)

#### TOP 3 PROGRAM STRATEGIES FOR HIV:

	<b>Community Awareness and Linkage to Care</b> 15 programs
	<b>Drug Development and Research</b> 14 programs
	<b>Health Service Delivery – Prevention</b> 14 programs

#### TOP 3 PARTNERS TYPES WORKING ON HIV:

<b>Government</b> 25 programs
<b>Global NGOs</b> 23 programs
<b>Academia or Research Institutes</b> 17 programs

#### TOP HIV PROGRAM RECIPIENT COUNTRIES:

<b>Kenya</b> 21 programs
<b>Tanzania</b> 21 programs
<b>Malawi</b> 20 programs

#### TOP 4 PARTNERS WORKING ON HIV:

<b>US Presidents Emergency Plan for AIDS Relief (PEPFAR)</b> 8 programs
<b>Clinton Health Access Initiative</b> 7 programs
<b>US Agency for International Development (USAID)</b> 7 programs
<b>ViiV Healthcare</b> 7 programs

# ViiV healthcare – Investing to research, develop, and deliver innovative health technologies to prevent HIV transmission, including Pre-Exposure Prophylaxis (PrEP) options

ACTIVE SINCE: 2014

ViiV is working with partners to invest in the research, development, and dissemination of innovative HIV prevention health technologies to prevent HIV transmission and end the AIDS epidemic as a public health threat by 2030.



## PROGRAM OVERVIEW

Innovative HIV prevention medicines, including Pre-Exposure Prophylaxis (PrEP), offer the potential to accelerate the global HIV prevention response, which is considerably off-track. ViiV aims to expand freedom and choice in access to innovative HIV medications to provide more targeted, people-centered care to improve health outcomes for diverse communities who are disproportionately impacted by HIV transmission and could benefit from a wider range of prevention options. Its HIV prevention research efforts are currently focused on investigating long-acting delivery technologies, including new mechanisms of action to complement existing alternatives.

## RESULTS AND MILESTONES

- In May 2022, ViiV signed a voluntary licensing agreement with the Medicines Patent Pool (MPP) terms for cabotegravir, its long-acting PrEP treatment, to enable access to this prevention health technology in resource-limited settings.
- In December 2021, the US FDA approved ViiV Healthcare's long-acting injectable PrEP option to reduce the risk of sexually transmitted HIV.

- STRATEGY:**  
Drug Development and Research
- SCOPE:**  
Active in seven countries in Sub-Saharan Africa
- TARGET POPULATION:**  
People with low incomes

## SUPPORTING PARTNERS (3 OF 5):

- Bill and Melinda Gates Foundation
- UNITAID
- HIV Prevention Trials Network (HPTN)

See [Global Health Progress](#) for the full program overview.

# Mothers2Mothers partnership

ACTIVE SINCE: 2006



Mothers2Mothers is a 16-year partnership supporting the employment of local women living with HIV as frontline health workers. Known as Mentor Mothers, these women provide Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCAH) assistance and contribute to ensure that no child is born with HIV and that mothers can live long and healthy lives.

## PROGRAM OVERVIEW

Over the course of 16 years, the mothers2mothers (m2m) partnership with the Johnson & Johnson Foundation aims to provide vulnerable communities access to high-quality healthcare and experience improved health and wellbeing. HIV-positive Mentor Mothers are trained to deliver high-quality, people-centered, peer-oriented care to the families and communities they serve. In response to the COVID-19 pandemic, m2m adopted a hybrid model to ensure that patients receive assistance both face-to-face and online through the Virtual Mentor Mother Platform (VMMP), providing a continuum of excellent client-centered care based on clients' needs and risk profiles. Through the collaboration, m2m also established a community service platform with enhanced messaging and information on COVID-19, primary health, and family wellbeing.

## RESULTS AND MILESTONES

- During the COVID-19 pandemic, m2m successfully pivoted to deliver eServices online to avoid the disruptions caused by COVID-19 lockdowns, strengthening the integrated emergency response to the COVID-19 pandemic.

- STRATEGY:**  
Health Systems Strengthening
- SCOPE:**  
Several Sub-Saharan African Countries, including Kenya, Mozambique and South Africa, through the current project
- TARGET POPULATION:**  
Women

## SUPPORTING PARTNERS (1 OF 1):

- Johnson & Johnson Foundation

See [Global Health Progress](#) for the full program overview.

# Go Further: Partnership to End AIDS and Cervical Cancer

ACTIVE SINCE: 2018



The Go Further partnership aims to reduce cervical cancer incidence by 95% among 11 million women living with HIV in 12 Sub-Saharan African countries by increasing access to the HPV vaccine, expanding screening, and providing treatment.

## PROGRAM OVERVIEW

In 2019, MSD joined the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the George W. Bush Institute (Bush Institute), and the Joint United Nations Program on HIV/AIDS (UNAIDS) in the Go Further: Partnership to End AIDS and Cervical Cancer among HIV-positive women in 12 Sub-Saharan African countries. These countries have the highest rates of HIV prevalence and cervical cancer deaths in the world.

HPV is the major cause of cervical cancer, and women who are HIV-positive are four to five times more likely to develop invasive cervical cancer. The Go Further partnership is working to support women with cervical cancer in Sub-Saharan Africa where over 100,000 women are diagnosed annually by increasing access to the human papillomavirus vaccine (HPV) to prevent cervical cancer, expanding the availability of vital cervical cancer screening, and providing treatment for women most vulnerable to developing cervical cancer.

## RESULTS AND MILESTONES

- As of July 2022, PEPFAR has completed nearly 4.5 million screenings for cervical cancer as part of the Go Further partnership.

- STRATEGY:**  
Health Service Delivery – Treatment
- SCOPE:**  
12 countries in Sub-Saharan Africa
- TARGET POPULATION:**  
Women, children

## SUPPORTING PARTNERS (3 OF 3):

- George W. Bush Institute
- PEPFAR
- UNAIDS

See [Global Health Progress](#) for the full program overview.



# New Horizons Collaborative: Improving Access to HIV Treatment and Care for Children and Youth in Need

ACTIVE SINCE: 2014

New Horizons Collaborative addresses critical gaps in pediatric HIV care and expand access to second- and third-line HIV medicines to children and adolescents in sub-Saharan Africa.

## PROGRAM OVERVIEW

Diagnosing HIV and starting treatment early are crucial measures in the effort to end the HIV epidemic and in closing the antiretroviral therapy (ART) coverage gap between adult and pediatric patients. The Collaborative builds on the success of the first seven years of the program. Its next phase, launched in 2021, is focused on implementing a number of enhancements to maximize its reach and impact, while continuing to expand access to medicines and strengthen health systems. The program will be recruiting patients until 2025, and will focus on donating two important HIV medicines to patients under 24 years of age and on strengthening the capacity of health systems in the 11 participating countries to advance pediatric and adolescent HIV care and enhance core national healthcare program elements, including access to medicines, supply-chain strengthening, and data generation.

## RESULTS AND MILESTONES

- As of July 2021, New Horizons had initiated 1,400 patients on second- and third-line ART across all participating countries, including Cameroon, Eswatini, Kenya, Lesotho, Nigeria, Republic of Congo, Rwanda, South Africa, Uganda, Zambia, and Zimbabwe.
- Evidence from an ongoing real-world EGPAF-led study suggests that 78% of children and adolescents on third-line ART with donated products achieve and maintain viral suppression at 12 months of being initiated on treatment.



**SCOPE:**  
Active in 11 Sub-Saharan countries

## SUPPORTING PARTNERS (1 OF 1):

→ **Elizabeth Glaser Pediatric AIDS Foundation**

See [Global Health Progress](#) for the full program overview.



**The fight for an AIDS-free generation, as well as a future free from TB, malaria, and COVID-19, depends on innovating and collaborating across sectors. Industry fuels new medical discoveries and brings private sector know-how to the front-line battles fought by the global health community for decades. Whether it involves building new vaccine technologies, developing products, strengthening health systems, or driving community engagement, corporate partners are an integral part of the global health response determined to overcome the challenges posed by these and emerging pandemics.**

**Trish Devine Karlin**  
Executive Vice President of External Affairs & Business Development at the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)

# MenStar

ACTIVE SINCE: 2018



MenStar is a unique coalition of partners founded to address the unique needs of men in the HIV epidemic and expand the diagnosis and treatment of HIV infections in men, particularly in sub-Saharan Africa.

## PROGRAM OVERVIEW

The \$1.2 billion MenStar coalition works to support innovative approaches to deliver HIV services to men to increase earlier uptake of HIV testing, linkage to care, and viral suppression. Data from UNAIDS and PEPFAR programs around the world shows that we are not adequately reaching at-risk men, particularly those ages 24-35 years, with HIV treatment services. This is endangering men's own health and helping fuel the spread of HIV among adolescent girls and young women.

MenStar's strategy utilizes a framework, based on data from MenStar research, to understand the barriers to treatment some men face across the HIV care cascade. Five categories of men within the HIV care cascade were identified: undiagnosed, not linked to care, newly in treatment, lost to follow up, and virally suppressed. To reach men in each of these categories, a core package of services was developed to meet men's needs across the treatment cascade. Tactics include targeted marketing, application of data analytics, demand creation, and supply-side solutions.

Examples of programs focused on men, which use the MenStar approach include:

- MINA (South Africa)
- MenConnect (South Africa)
- Virtually Accelerating Linkage of Men to Reframed HIV Services (VALOR) Initiative (Nigeria)
- Dablap-CCMDD (South Africa)
- Somos Iguais (Mozambique)
- Chukua Selfie (Kenya)

## RESULTS AND MILESTONES

- The coalition partners seek to enhance each other's work and accelerate progress towards achieving the 95-95-95 targets.
- Since the launch of Menstar in Q4 of 2018, it has reached an additional 3 million men with HIV treatment and, of those, 95% are virally suppressed.



**STRATEGY:**  
Community Awareness and Linkage to Care



**SCOPE:**  
Active in African countries



**TARGET POPULATION:**  
Men

## SUPPORTING PARTNERS (3 OF 6):

- **The Global Fund to Fight AIDS**
- **US Presidents Emergency Plan for AIDS Relief (PEPFAR)**
- **Unitaid**

See [Global Health Progress](#) for the full program overview.

# Tuberculosis



**The COVID-19 pandemic has set the world further off-track to meet global TB targets. COVID-19 learnings and renewed commitments could reverse worsening trends and reignite the fight toward a world free of TB.**

Tuberculosis claimed over 1.5 million lives in 2020.<sup>22</sup> The pandemic has resulted in a reduction in access to TB diagnosis and treatment services with a subsequent global drop in case reporting and an increase in related deaths. Previous progress in reducing the number of new TB cases has halted and there has been a decline in global investments in diagnosis, treatment, and prevention services.<sup>23</sup> The WHO's **End TB Strategy 2030** goals will not be met without intensified R&D efforts for diagnostics, vaccines, and therapeutics; financial and political commitments; and the provision of comprehensive, integrated, and patient-centered prevention and care.

## Together against TB – joint forces to achieve common goals

Access to TB prevention, diagnostic, and treatment services is a critical component of worldwide efforts to achieve UHC and health progress, as well as to mitigate the risk of AMR. Finding and diagnosing the “missing millions” and the lack of access to quality antimicrobials remain major challenges in the fight to eliminate TB. The biopharmaceutical industry supports numerous health system strengthening initiatives, including infrastructure and research and clinical trials capacity building, but also programs to expand access to diagnosis, treatment, and care, as well as to promote national and regional surveillance efforts, including for drug-susceptibility testing. The industry also leverages its unique skillset in behavioral and cultural consumer insights to create innovative ways to tackle disease management and engage new communities, such as youth, in the fight against TB. Some of these initiatives include the use of artificial intelligence (AI) and digital technologies for TB testing, treatment, and education. For example, Johnson & Johnson leverages social media to engage youth in volunteerism, increase awareness of TB, and impact health-seeking behaviors in Southeast Asia, India, and South Africa. Industry efforts to fight TB are frequently undertaken through multistakeholder partnerships such as the Stop TB Partnership and the Ending Workplace TB initiative.<sup>24</sup>

G20 countries such as China, India, Indonesia, and South Africa are listed amongst the WHO's 30 higher-burden TB and drug-resistant-TB countries. The industry is involved in advocacy efforts at the highest political level to promote bold policies and supportive systems in the fight against TB. Advocating for increased domestic funding and policy frameworks in these countries could make a significant difference in the progress toward achieving TB 2030 goals.

## Global attention accelerates progress

These goals will not be achieved without technological breakthroughs and financial investments in the development of new TB diagnostics, therapeutics, and vaccines. High-level initiatives are pushing TB innovation to center stage. The WHO's Global Strategy for TB Research and Innovation is evaluating preventive treatment options and trial designs using biomarkers that could allow for smaller and cheaper trials<sup>25</sup>, with further advances expected at the WHO's Tuberculosis Drug Discovery and Development Conference set to take place in 2023.

IFPMA member companies remain unwaveringly committed to exploring innovative solutions and are involved in a wide number of global collaborations and R&D projects for new TB treatments and vaccines. Unilaterally and through partnerships such as the TB Alliance, the industry is also spearheading efforts for the development of new vaccines that can prevent



**We cannot end TB – or any pandemic – without scientific breakthroughs. Biomedical innovations, developed with a relentless focus on access and affordability, are vital to fighting AIDS, TB, and malaria. As a non-profit product development partnership, the TB Alliance is proud to work hand in hand with industry partners to bring cutting-edge science to all patients in need.**

**Pietro Turilli**  
Senior Vice President of External Affairs at the TB Alliance

infection and lower the risk of diseases amongst those already infected or living with latent TB. There has been commendable progress in the past few years, leading to the development of several TB vaccine candidates, including a mRNA TB vaccine that could enter clinical trials in 2022.<sup>26</sup>

On therapeutic innovations, treatments that are compatible for people with TB and HIV co-infections are incredibly important as TB is one of the leading causes of death in HIV-infected people. Likewise, shortening treatment regimens is critical in the fight against TB, as long treatment regimens challenge people's ability to adhere to prescribed therapeutic programs and can lead to AMR. Finding innovative solutions for drug-resistant TB is paramount to tackle a threat that now accounts for nearly one-third of all deaths directly attributable to AMR.<sup>27</sup> The industry is highly invested in this endeavor. For instance, Johnson & Johnson and Otsuka have developed novel

multidrug-resistant TB (MDR-TB) medicines and are working to advance research and development for the next-generation of TB drugs and regimens.<sup>28,29</sup>

In light of the COVID-19 experience, strategies such as advanced purchase agreements could be leveraged to de-risk investments in R&D for TB. While TB faces scientific and financing constraints, lessons learned from COVID-19 may help speed up the development of diagnostics and therapeutics and even put an end to the search for a TB vaccine, which already spans over a century. Yet, these innovations will not reach the ‘missing millions’ without improved surveillance infrastructure and testing capacity able to diagnose patients and identify those in need of treatment. These two ends of the continuum must be addressed in parallel if we are to meet the TB 2030 goals.

### SPOTLIGHT ON:

**5/49** TB programs in this report

Explore the full range of programs at [globalhealthprogress.org](https://globalhealthprogress.org)

### TOP 3 PROGRAM STRATEGIES FOR TB:

	<b>Drug Development and Research</b> 21 programs
	<b>Community Awareness and Linkage to Care</b> 11 programs
	<b>Health Service Delivery – Prevention</b> 10 programs

### TOP 3 PARTNERS TYPES WORKING ON TB:

<b>Government</b> 28 programs
<b>Global NGOs</b> 23 programs
<b>Academia or Research Institutes</b> 21 programs

### TOP TB PROGRAM RECIPIENT COUNTRIES:

<b>India</b> 13 programs
<b>South Africa</b> 12 programs
<b>Tanzania</b> 10 programs

### TOP PARTNERS WORKING ON TB:

<b>Bill &amp; Melinda Gates Foundation</b> 10 programs
<b>US National Institutes of Health (NIH)</b> 9 programs
<b>Center for Disease Control and Prevention, Infectious Disease Research Institute (IDRI) US Agency for International Development (USAID)</b> 6 programs

## TB Alliance

ACTIVE SINCE: 2000

The TB Alliance is a not-for-profit product development partnership (PDP) to leverage a global network of public and private partners to advance TB drug development efficiently.



### PROGRAM OVERVIEW

The Global Alliance for TB Drug Development (TB Alliance) brings together industry, NGOs, governments, foundations, and more than 30 partners around the world to accelerate the discovery, development, and delivery of better, faster-acting, and cost-effective new tuberculosis medicines. By outsourcing medicine R&D projects, medicine compounds are moved along the development line to achieve regulatory approval and bring them to market at affordable prices for those countries experiencing the highest-burden from TB. The TB Alliance has partnered with some of the world's leading drug developers to jointly manage TB drug discovery portfolios, drawing on the best practices and resources of the public and private sectors to accelerate the discovery and development of cost-effective new anti-TB medicines. These should shorten or simplify treatment, provide a more effective response to multidrug-resistant TB, and improve treatment of latent TB infection.

### RESULTS AND MILESTONES

- In 2021, 1,845 patients from 31 countries used the TB Alliance's products to treat drug-resistant TB.
- To date, 15 countries or regulatory bodies have approved the TB Alliance's drug-resistant drug pretomanid as part of a regimen for treating patients with highly drug-resistant forms of TB.

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Global Commitment

**TARGET POPULATION:**  
Men, Women, Elderly, People with low incomes

### SUPPORTING PARTNERS (3 OF 32):

- Bill and Melinda Gates Foundation
- NIH
- UNITAID

See [Global Health Progress](#) for the full program overview.

## UNITE4TB

ACTIVE SINCE: 2021

UNITE4TB aims to accelerate the development of new tuberculosis drug regimens as part of the Innovative Medicines Initiative (IMI), a public-private European Research & Development Consortium.



### PROGRAM OVERVIEW

UNITE4TB (academia and industry united innovation and treatment for tuberculosis) is a public-private collaboration with representation from academic institutions, small- and medium-sized enterprises (SMEs), public organizations, and pharmaceutical companies that aims to develop new medicines to treat or prevent resistant bacterial infections. By achieving its goals, UNITE4TB will help meet one of the main unmet needs in tuberculosis care: better-tolerated, shorter-duration drug regimens that can be used across drug-resistance patterns and co-morbidities.

### RESULTS AND MILESTONES

- Over the coming 7 years, the consortium will be active in 40 trial sites on four continents (Europe, Asia, Africa, and South America) to accelerate the development of new TB drugs and regimens.

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Global Commitment

See [Global Health Progress](#) for the full program overview.

## Ending Workplace TB

ACTIVE SINCE: 2020

This initiative leverages the untapped potential of private businesses in high TB-burden countries and roll out awareness, detection, and treatment programs to reach workforces and their families and communities.



### PROGRAM OVERVIEW

The continued spread of TB is driven in part by the "missing millions" of people who are not formally diagnosed. This means that people living with this highly contagious disease cannot be treated, putting their health, and that of their families and communities, at risk. This problem is particularly acute for businesses. Unlike many other diseases, TB tends to impact people during their most productive years – from 15 to 65 years of age. People sickened by TB often miss work, underperform, or even drop out of work altogether, which in addition to creating a cycle of poverty and poor health that is exceptionally difficult to break, comes at an extraordinary economic price.

With this initiative, the companies and partners that comprise Ending Workplace TB are identifying and connecting more people to TB care and treatment, while improving productivity and reducing costs related to health care, staff turnover, and absenteeism.

**STRATEGY:**  
Community Awareness and Linkage to Care

**SCOPE:**  
Global Commitment

### SUPPORTING PARTNERS (3 OF 4):

- Global Fund to Fight AIDS, Tuberculosis, and Malaria
- Stop TB Partnership
- US Agency for International Development (USAID)

See [Global Health Progress](#) for the full program overview.

## Otsuka MDR-Tuberculosis R&D

ACTIVE SINCE: 2014

This research program aims to deliver safer, shorter, more effective treatment regimens in order to end TB in line with the UN Sustainable Development Goals (SDGs) 2030.



### PROGRAM OVERVIEW

For more than 50 years, Otsuka has made TB research a priority, including strengthening clinical trial capacity and infrastructure in selected countries affected by TB. Amongst its TB efforts, Otsuka is committed to helping eliminate multidrug-resistant (MDR) TB. Its first oral treatment against adult pulmonary MDR-TB, delamanid, was discovered in 2002 and, in 2015, it was included in the WHO's Essential Medicines List. Furthermore, Otsuka is committed to implementing the Rome Action Plan to accelerate HIV & TB diagnostics and medicines for children living with HIV. As part of this commitment, it has developed and trialed a child-friendly 25mg dispersible tablet formulation of delamanid, worked in collaboration with regulatory authorities to have them approved, and supported their equitable access.

### RESULTS AND MILESTONES

- Since 2004, Otsuka has invested more than US\$500 million in TB R&D, leading to the approval and launch of delamanid (Delyba®) for MDR-TB in children and adults.
- Otsuka's second anti-TB compound (OPC-167832) is currently in clinical trials supported by the Bill and Melinda Gates Foundation.

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Global Commitment

**TARGET POPULATION:**  
Children, People with low incomes

### SUPPORTING PARTNERS (3 OF 9):

- Médecins Sans Frontières (MSF)
- Bill and Melinda Gates Foundation
- FIND Diagnostics

See [Global Health Progress](#) for the full program overview.

## The Project to Accelerate New Treatments for Tuberculosis (PAN-TB collaboration)

ACTIVE SINCE: 2020

The PAN-TB collaboration is a first-of-its-kind collaboration among philanthropic, non-profit, and the private sectors that aims to accelerate the development of an investigational drug regimen capable of treating all forms of tuberculosis.

### PROGRAM OVERVIEW

The PAN-TB collaboration aims to accelerate the development of novel “pan-TB” drug regimens designed to have little to no drug resistance and acceptable safety and tolerability profiles, and that are shorter in duration and simpler to use than existing options. The collaboration leverages members’ collective assets, resources, and scientific expertise to identify and evaluate new drug regimens, focusing on advancing research through phase 2/3 clinical efficacy studies, ultimately accelerating the path of these candidate drugs in reaching patients in need.

### RESULTS AND MILESTONES

- In January 2020, PAN-TB started a collaboration with European Regimen Accelerator for Tuberculosis (ERA4TB) to ensure the new molecular entities identified by ERA4TB in early research stages will be incorporated into the PAN-TB collaboration’s late-stage clinical research.
- In August 2022, PAN-TB announced a joint development agreement (JDA) between Janssen Pharmaceutica NV, Otsuka, TB Alliance and the Bill & Melinda Gates Medical Research Institute (Gates MRI), supporting the progression of two investigational TB combination treatment regimens into phase 2 clinical development, with the goal of identifying a regimen suitable for phase 3 development.

Johnson & Johnson

Otsuka GSK

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Global Commitment

### SUPPORTING PARTNERS (2 OF 2):

- Evotec
- Bill & Melinda Gates Medical Research Institute

See [Global Health Progress](#) for the full program overview.



Research and development of new tools are needed to end TB. But for impact, these tools need to be accessed by poorer nations where TB is concentrated. Industry plays a crucial role in the research and development of new tools and in ensuring that people in need will benefit from these tools by contributing to the removal of access and affordability barriers.

**Dr Lucica Ditiu**  
Executive Director at Stop TB Partnership



# Malaria



Progress to eliminate malaria stagnated even before setbacks and disruptions experienced during the COVID-19 pandemic. A successful Global Fund Replenishment could drop mortality and incidence rates over 60% by 2026.

In 2015, the World Health Assembly (WHA) adopted the WHO Global Technical Strategy (GTS) for Malaria 2016-2030.<sup>30</sup> It is a global plan that aims to reduce global malaria incidence and mortality rates by 90% by 2030 and eliminate the disease from at least 35 countries while preventing its re-establishment in malaria-free countries. In May 2021, the WHA endorsed an updated version of the GTS that emphasizes country leadership, data-driven implementation strategies, and the need for resilient health systems able to provide an integrated and multisectoral response. It also highlights the need for accelerating innovation to achieve the targets.<sup>31</sup>

## The climate crisis increases the urgency

Aligned with this need, the theme for World Malaria Day 2022 was, “Harness innovation to reduce the malaria disease burden and save lives.” The GTS for malaria foresees research activities to facilitate new interventions, maximize cost-effectiveness and impact of existing ones, and support basic research to develop new diagnostic, prophylactic, and therapeutic tools as well as understanding resistance of mosquitoes toward insecticides. This seems more urgent than ever considering the link between climate change and vector-borne diseases, where global warming is potentially putting billions more lives at risk and natural disasters relating to climate change are becoming increasingly prevalent.<sup>32,33</sup>

## Important new interventions, yet no magic bullet

After over 25 years of R&D efforts by a wide network of partners, the WHO recommended RTS,S, the first malaria vaccine, in October 2021 for widespread use in children living in malaria endemic countries.<sup>34</sup>

Efforts are now underway to support introduction, procurement, and delivery to help ensure the long-term, sustainable supply of the RTS,S vaccine in sub-Saharan Africa.<sup>35,36</sup> The pipeline for new vaccines and treatments against malaria remains active, with hopes placed on mRNA vaccines, the University of Oxford’s R21 vaccine, and next-generation antibody treatments.

No single tool will be able to control the disease in high-burden settings, and multi-pronged malaria elimination strategies will be critical. The RTS,S vaccine is an important additional tool to help control this disease alongside other interventions, such as insecticide-treated bed nets, indoor spraying with insecticides, malaria chemoprevention, and timely testing and treatment. Further, programs that work in an integrated approach across disease areas, such as Novartis’ program to diagnose children with malaria, pneumonia, and diarrhea, are critical to reduce the burden of these epidemics.<sup>37</sup>

The World Malaria Report 2021 underscores the need to tailor malaria responses to local settings, harness innovation, strengthen health systems, and ensure robust funding as key factors to reach global malaria targets. Governments’ role in working with communities for tailored national and regional malaria strategies is key. Increased investment to expand the malaria R&D pipeline as well as domestic implementation and delivery strategies to ensure these innovations reach local communities in malaria endemic countries are needed. This includes the need for comprehensive and integrated malaria national plans, which could help minimize the burden of the disease, reduce gender inequalities, and ensure country preparedness to absorb new technologies for malaria elimination. As most of our case studies exemplify, multi-sectoral and cross-sectoral collaboration has been key in the global progress against malaria and is likely to spearhead future progress as we strive toward the elimination of the disease.



When I was a child growing up in Zambia, I got malaria. Someone, somewhere invested in malaria treatment – otherwise I would have died. Someone, somewhere participated in a clinical trial for my benefit. These were realizations I came to only as an adult, and I knew I must reciprocate by contributing to fit-for-purpose African drug discovery and development. Multisectoral partnerships, including with the innovative pharmaceutical industry, have helped make this possible.

**Kelly Chibale**

Founder and Director of H3D and Chairman and CEO of H3D Foundation

### SPOTLIGHT ON:

# 5/30 Malaria programs in this report

Explore the full range of programs at [globalhealthprogress.org](https://globalhealthprogress.org)

#### TOP 3 PROGRAM STRATEGIES FOR MALARIA:

	<b>Drug Development and Research</b> 18 programs
	<b>Community Awareness and Linkage to Care</b> 9 programs
	<b>Health Service Delivery – Prevention</b> 9 programs

#### TOP 3 PARTNERS TYPES WORKING ON MALARIA:

<b>Government</b> 16 programs
<b>Global NGOs</b> 15 programs
<b>Academia or Research Institutes</b> 13 programs

#### TOP MALARIA PROGRAM RECIPIENT COUNTRIES:



#### TOP PARTNERS WORKING ON MALARIA:

<b>Medicines for Malaria Venture (MMV)</b> 8 programs
<b>Bill &amp; Melinda Gates Foundation, US National Institutes of Health (NIH)</b> 6 programs
<b>IBR Conicet, PATH Malaria Vaccine Initiative, Seattle Children’s Research Institute, Swiss Tropical and Public Health Institute</b> 4 programs

## Business Alliance Against Malaria (BAAM)

ACTIVE SINCE: 2017

BAAM serves as the only platform that unites companies across industries and continents acting as a catalyst, fostering and advancing ideas to shape global and regional policy, mobilize stakeholders, and bolster the work of those who share the vision of a malaria-free world.



### PROGRAM OVERVIEW

Formerly known as the Private Sector Malaria Coalition (PSMC), BAAM aims to leverage the private sector's leadership and innovation to see the elimination of malaria within our lifetime. BAAM unites companies across industries and continents to bring multi-sector expertise and strategic partnership and encourage the global community to prioritize investments in the development and scale-up of new tools and technologies for fighting malaria and emerging disease threats. In the past 5 years, and under the vision that resources invested in the fight against malaria play a central role in building overall stronger and more resilient health systems, BAAM members have made significant contributions to malaria treatment innovations.

### RESULTS AND MILESTONES

→ In April 2022, BAAM launched *Why Business Should Fight Malaria: An Investment Case*, which aimed to address the challenge of flat-lining funding for malaria programming while arming health leaders with the evidence to increase private sector engagement in the fight against malaria.

**STRATEGY:**  
Community Awareness and Linkage to Care

**SCOPE:**  
Global Commitment

### SUPPORTING PARTNERS (3 OF 6):

- Roll Back Malaria Partnership (RBM)
- International Public Health Advisors
- High Lantern Group (HLG)

See [Global Health Progress](#) for the full program overview.

## Medicines for Malaria Venture (MMV)

ACTIVE SINCE: 1999



MMV aims to reduce the burden of malaria in disease-endemic countries by working with partners to discover, develop, and facilitate delivery of new, effective, and affordable antimalarial drugs.

### PROGRAM OVERVIEW

Since its inception, MMV has built an extensive network of over 400 partners from the pharmaceutical, academic, and government sectors in more than 55 countries, as well as private foundations, international organizations, corporate foundations, and private individuals. Their collective action is driven toward projects to develop new, effective, and affordable medicines for the treatment and prevention of malaria as well as toward targeted access and product management interventions to help ensure that vulnerable populations in malaria-endemic countries can access new malaria medicines. MMV currently manages a portfolio of over 65 antimalarial R&D and access projects, including 10 compounds in clinical development to address currently unmet medical needs such as medicines for children, pregnant women, and relapsing malaria, as well as drugs that could support the elimination/eradication agenda.

### RESULTS AND MILESTONES

→ Since its foundation in 1999, MMV has made 14 affordable and quality-assured medicines available to patients, with its medicines estimated to have saved 3 million lives worldwide.

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Global Commitment

**TARGET POPULATION:**  
Children, People with low incomes, Marginalized/indigenous people

### SUPPORTING PARTNERS (3 OF 9):

- Bill & Melinda Gates Foundation
- Wellcome Trust
- PATH

See [Global Health Progress](#) for the full program overview.

## Malaria Vaccine Implementation Program (MVIP)



ACTIVE SINCE: 2017

Country-led and WHO coordinated, MVIP aims to assess the potential role of GSK's RTS,S malaria vaccine in reducing childhood deaths and its impact and safety in the context of routine use.

### PROGRAM OVERVIEW

The MVIP program seeks to provide evidence to support the broader use of the RTS,S/AS01 malaria vaccine in young children. The MVIP began in 2019 when Ghana, Kenya, and Malawi introduced the vaccine in selected areas through routine immunization programs. In 2021, the RTS,S malaria vaccine was recommended by WHO for broad use in children at risk in Sub-Saharan Africa and in other regions with moderate to high transmission of malaria caused by *Plasmodium falciparum*. In December 2021, Gavi approved funding enabling LMICs to consider adding the RTS,S malaria vaccine as an additional tool to combat malaria by investing in vaccine introduction, procurement, and delivery.

### RESULTS AND MILESTONES

→ GSK is conducting further Phase 4 studies in regions where the RTS,S/AS01 pilot implementation program (MVIP) is being conducted to gather additional information on the vaccine's effectiveness and any side effects associated with its long-term use.

→ The MVIP is anticipated to end in 2023 when full data is expected to be gathered.

**STRATEGY:**  
Drug Development and Research

**SCOPE:**  
Active in three Sub-Saharan African countries

**TARGET POPULATION:**  
Children, People with low incomes

### SUPPORTING PARTNERS (2 OF 2):

- World Health Organization (WHO)
- PATH Malaria Vaccine Initiative (MVI)

See [Global Health Progress](#) for the full program overview.



## Novartis R&D for Malaria

ACTIVE SINCE: 2006

Novartis is collaborating with several partners to discover new antimalarial compounds that employ new mechanisms of action and activity against artemisinin-resistant strains of the disease.

### PROGRAM OVERVIEW

Novartis is collaborating with partners to develop next-generation antimalarials, and currently leads a number of malaria development programs featuring compounds that employ new mechanisms of action and activity against artemisinin-resistant malaria strains of the disease.

### RESULTS AND MILESTONES

- KAF156 (ganaplacide) belongs to a novel class of antimalarial compounds that act against both the blood and liver stages of the parasite's lifecycle and has potent transmission blocking activity. It has demonstrated activity against both vivax and falciparum malaria, including artemisinin-resistant parasites, and had positive Phase 2 clinical trial results in adults and children.
- KAE609 (cipargamin) is another compound with a novel mechanism of action, currently in Phase 2 trials, which displays extremely rapid parasite clearance in patients.
- In 2020, Novartis advanced another novel malaria therapy, INE963, a fast acting long-lasting antimalarial with an entirely new mechanism of action that is currently in early clinical trials.



- STRATEGY:** Drug Development and Research
- SCOPE:** Global Commitment
- TARGET POPULATION:** Children, Women, People with low incomes, Marginalized/indigenous people

### SUPPORTING PARTNERS (3 OF 5):

- Medicines for Malaria Venture (MMV)
- Wellcome Trust
- The European & Developing Countries Clinical Trials Partnership (EDCTP)

See [Global Health Progress](#) for the full program overview.



Collaborating for a sustainable future

# FIGHTING FOR WHAT COUNTS TO ELIMINATE HIV, TUBERCULOSIS, AND MALARIA

To achieve a HIV, TB, and malaria free world, we need to come together to tackle the global challenges of these disease. In support of the Global Fund replenishment, now is the time to work together to accelerate care and treatment for HIV, TB, and malaria for people around the world, with a focus on the most vulnerable.

We must learn from one another and share expertise with diverse partners. In doing so, we will seek out new frontiers in R&D for life-saving treatments and vaccines and establish meaningful partnerships to pool resources to ensure no time is wasted.

The 17 program case studies showcased in this report represent a small segment of the work done by our member companies to address HIV, TB, and malaria. We are currently collaborating on an additional 80 programs targeting these disease areas and over 280 programs contributing across all areas of health.

The full breadth of our collaborations can be explored on [Global Health Progress](#).

However, we recognize we need to excel our collaborations as part of our commitment to the SDGs and UHC, we want to advance our global health partnerships and programs to build bridges across sectors, opening new doors and giving rise to sustainable and innovative health solutions. We invite interested parties and potential partners to register their interest on [Global Health Progress](#) to work together on existing or new programs.

We believe together we can change the way we tackle key global health challenges, ensuring patients receive the care and treatment they need, and no one is left behind.

Explore the collaborations at [globalhealthprogress.org](http://globalhealthprogress.org)

## MOSKI KIT

ACTIVE SINCE: 2001

MOSKI KIT provides an 'edutainment' training toolkit for teachers and children to raise awareness and provide education on malaria, supporting better disease prevention, diagnosis, and management.



### PROGRAM OVERVIEW

Sanofi supports a holistic approach to defeat malaria for the appropriate prevention, diagnosis, and treatment of the disease. MOSKI KIT provides teachers with materials to teach primary school children about the basics of malaria, using engaging educational tools and games. MOSKI KIT materials, available also on YouTube, work to empower children to become advocates, spreading key messages within their community in support of broader behavioral change. The messages used in the tools are based on national malaria strategic plans and are designed in collaboration with specialists and end-users.

### RESULTS AND MILESTONES

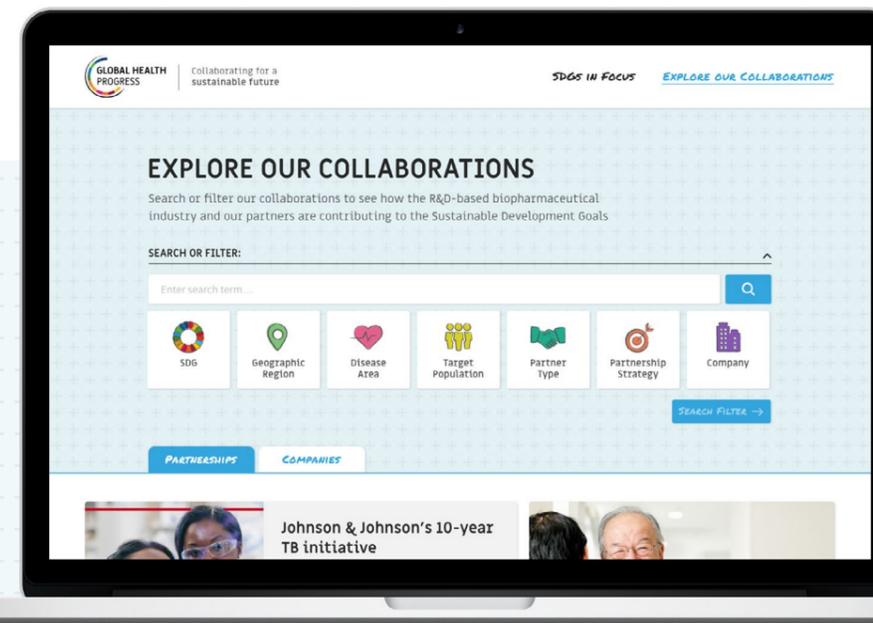
- Since 2018, Sanofi has been developing new educational tools designed to adapt to and accommodate a range of different needs and audiences. These digital solutions are accessible for free on YouTube allowing the resources to reach a broader population.

- STRATEGY:** Community Awareness and Linkage to Care
- SCOPE:** Active in 16 African countries
- TARGET POPULATION:** Children

### SUPPORTING PARTNERS (1 OF 1):

- National Malaria Control Programs

See [Global Health Progress](#) for the full program overview.



# References

1. **UNAIDS**, 2022. UNAIDS Global AIDS Update 2022. [online] Available at: <[https://www.unaids.org/sites/default/files/media\\_asset/2022-global-aids-update\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/2022-global-aids-update_en.pdf)> [Accessed 10 August 2022].
2. **The Global Fund**, 2022. Fight for what counts - Investment Case, Seventh Replenishment 2022. [online] Available at: <[https://www.theglobalfund.org/media/11798/publication\\_seventh-replenishment-investment-case\\_report\\_en.pdf](https://www.theglobalfund.org/media/11798/publication_seventh-replenishment-investment-case_report_en.pdf)> [Accessed 10 August 2022].
3. **Weiss, Daniel J et al.**, 2021. Indirect effects of the COVID-19 pandemic on malaria intervention coverage, morbidity, and mortality in Africa: a geospatial modelling analysis. *The Lancet Infectious Diseases*, Volume 21, Issue 1, 59 - 69
4. **IFPMA**, 2022. Applying Lessons Learned from COVID-19 to Create a Healthier, Safer, More Equitable World. [online] Available at: <<https://www.ifpma.org/resource-centre/applying-lessons-learned-from-covid-19-to-create-a-healthier-safer-more-equitable-world/>> [Accessed 10 August 2022].
5. **NCD Alliance**, 2020. Open letter to the Global Fund to Fight AIDS, TB, and Malaria. [online] Available at: <[https://ncdalliance.org/sites/default/files/resource\\_files/Open%20Letter%20to%20Global%20Fund.pdf](https://ncdalliance.org/sites/default/files/resource_files/Open%20Letter%20to%20Global%20Fund.pdf)> [Accessed 10 August 2022] / **IFPMA**, 2022. Applying Lessons Learned from COVID-19 to Create a Healthier, Safer, More Equitable World. [online] Available at: <<https://www.ifpma.org/resource-centre/applying-lessons-learned-from-covid-19-to-create-a-healthier-safer-more-equitable-world/>> [Accessed 10 August 2022].
6. **The Global Fund**, 2022. Fight for what counts - Investment Case, Seventh Replenishment 2022. [online] p16 Available at: <[https://www.theglobalfund.org/media/11798/publication\\_seventh-replenishment-investment-case\\_report\\_en.pdf](https://www.theglobalfund.org/media/11798/publication_seventh-replenishment-investment-case_report_en.pdf)> [Accessed 10 August 2022].
7. **IFPMA**, 2022. BERLIN DECLARATION – Biopharmaceutical Industry Vision for Equitable Access in Pandemics. [online] Available at: <<https://www.ifpma.org/resource-centre/berlin-declaration-biopharmaceutical-industry-vision-for-equitable-access-in-pandemics/>> [Accessed 10 August 2022].
8. **Clinicaltrials.gov**, Advanced keyword search (Tuberculosis, HIV/AIDS, Malaria). [online] Access: <<https://clinicaltrials.gov/ct2/search/advanced?cond=&term=&cntry=&state=&city=&dist=>>
9. **The Lancet Commissions**, 2021. The Lancet Commission on diagnostics: transforming access to diagnostics <[www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00673-5/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00673-5/fulltext)> [Accessed 18 August 2022]
10. **WHO**, 2016. Global strategy on human resources for health: Workforce 2030. Available at: <<https://apps.who.int/iris/bitstream/handle/10665/250368/9789241511131-eng.pdf>> [Accessed 10 August 2022].
11. **UNAIDS**, 2022. Global HIV & AIDS statistics — Fact sheet. [online] Available at: <<https://www.unaids.org/en/resources/fact-sheet>> [Accessed 10 August 2022].
12. **UNAIDS**, 2018. Women and girls and HIV. [online] Available at: <[https://www.unaids.org/sites/default/files/media\\_asset/women\\_girls\\_hiv\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/women_girls_hiv_en.pdf)> [Accessed 10 August 2022].
13. **UNAIDS**, 2022. UNAIDS Global AIDS Update 2022. [online] Available at: <[https://www.unaids.org/sites/default/files/media\\_asset/2022-global-aids-update\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/2022-global-aids-update_en.pdf)> [Accessed 10 August 2022].
14. **WHO**, 2019. Treat all: policy adoption and implementation status in countries. [online] Available at: <<https://www.who.int/publications/i/item/treat-all-policy-adoption-and-implementation-status-in-countries>> [Accessed 10 August 2022] / **UNIDS**, 2015. Understanding Fast Track: Accelerating action to end the AIDS epidemic by 2030. [online] Available at: <[https://www.unaids.org/sites/default/files/media\\_asset/201506\\_JC2743\\_Understanding\\_FastTrack\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/201506_JC2743_Understanding_FastTrack_en.pdf)> [Accessed 10 August 2022].
15. **IFPMA**, HIV/AIDS: overcoming one of the worst human pandemics. [online] Available at: <<https://50years.ifpma.org/in-focus/hiv-aids/>> [Accessed 10 August 2022].
16. **AIDSmap**, 2021. Types of antiretroviral medications. [online] Available at: <<https://www.aidsmap.com/about-hiv/types-antiretroviral-medications>> [Accessed 10 August 2022].
17. **Medicines Patent Pool**, 2022. Viiv Healthcare and the Medicines Patent Pool sign new voluntary licensing agreement to expand access to innovative long-acting HIV prevention medicine. [online] Available at: <<https://medicinespatentpool.org/news-publications-post/viiv-healthcare-and-the-medicines-patent-pool-sign-new-voluntary-licensing-agreement-to-expand-access-to-innovative-long-acting-hiv-prevention-medicine>> [Accessed 10 August 2022].
18. **WHO**, 2022. WHO recommends long-acting cabotegravir for HIV prevention. [online] Available at: <<https://www.who.int/news/item/28-07-2022-who-recommends-long-acting-cabotegravir-for-hiv-prevention>> [Accessed 10 August 2022].
19. **WHO**, Mother-to-child transmission of HIV. [online] Available at: <<https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/hiv-prevention/mother-to-child-transmission-of-hiv>> [Accessed 10 August 2022].
20. **Pharma**, 2021. Biopharmaceutical Innovation in Fighting HIV/AIDS. [online] Available at: <<https://phrma.org/-/media/Project/PhRMA/PhRMA-Org/PhRMA-Org/PDF/A-C/Biopharmaceutical-Innovation-in-Fighting-HIVAIDS-2.pdf>> [Accessed 10 August 2022].
21. **Roche**, 2019. Roche expands the Global Access Program beyond HIV to also include diagnostic tests for Tuberculosis, Hepatitis, and Human Papillomavirus. [online] Available at: <<https://diagnostics.roche.com/global/en/news-listing/2019/roche-expands-the-global-access-program-beyond-hiv.html>> [Accessed 10 August 2022].
22. **WHO**, 2021. Tuberculosis - Key Facts. [online] Available at: <<https://www.who.int/news-room/fact-sheets/detail/tuberculosis>> [Accessed 10 August 2022].
23. **WHO**, 2021. Global tuberculosis report 2021 [online] Available at: <<https://www.who.int/publications/i/item/9789240037021>> [Accessed 10 August 2022]. / **WHO**, Impact of the COVID-19 pandemic on TB detection and mortality in 2020. [online] Available at: <[https://cdn.who.int/media/docs/default-source/hq-tuberculosis/impact-of-the-covid-19-pandemic-on-tb-detection-and-mortality-in-2020.pdf?sfvrsn=3fdd251c\\_16&download=true](https://cdn.who.int/media/docs/default-source/hq-tuberculosis/impact-of-the-covid-19-pandemic-on-tb-detection-and-mortality-in-2020.pdf?sfvrsn=3fdd251c_16&download=true)> [Accessed 10 August 2022].
24. **The Global Fund**, 2022. The Pivotal Role the Private Sector Can Play in Fight Against TB. [online] Available at: <<https://www.theglobalfund.org/en/opinion/2022/2022-03-24-the-pivotal-role-the-private-sector-can-play-in-fight-against-tb/>> [Accessed 10 August 2022].
25. **WHO**, 2022. Consolidated report of country success stories in mitigating the impact of the COVID-19 pandemic on TB services. [online] Available at: <<https://apps.who.int/iris/rest/bitstreams/1418690/retrieve>> [Accessed 10 August 2022].
26. **Gavi**, 2022. Can mRNA vaccine tech take on tuberculosis? [online] Available at: <<https://www.gavi.org/vaccineswork/can-mrna-vaccine-tech-take-tuberculosis>> [Accessed 10 August 2022].
27. **TB Alliance**, Antimicrobial Resistance. [online] Available at: <<https://www.tballiance.org/why-new-tb-drugs/antimicrobial-resistance>> [Accessed 10 August 2022].
28. **Otsuka Pharmaceutical**, After 40 Years, A New Drug For The Treatment Of Tuberculosis In Japan Delamanid; (delamanid) Is The First Drug Approved In Japan Specifically For Pulmonary Multidrug-Resistant Tuberculosis (MDR-TB). [Online] Available at: <[https://www.otsuka.co.jp/en/company/newsreleases/2014/20140704\\_2.html](https://www.otsuka.co.jp/en/company/newsreleases/2014/20140704_2.html)> [Accessed 10 August 2022].
29. **Johnson and Johnson**, Advancing the Future of Tuberculosis Treatment. [online] Available at: <<https://www.jnj.com/tb/advancing-the-future-of-tb-treatment-fact-sheet>> [Accessed 10 August 2022].
30. **WHO**, 2021, World Malaria Report 2021. [online] Available at: <<https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2021>> [Accessed 10 August 2022].
31. **IPCC**, Health, Wellbeing and the Changing Structure of Communities. [online] Available at: <[https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_Chapter07.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Chapter07.pdf)> [Accessed 10 August 2022].
32. **Wellcome Trust**, Five things the latest IPCC report tells us about climate change and health. [online] Available at: <<https://wellcome.org/news/ipcc-report-climate-change-and-health>> [Accessed 10 August 2022].
33. **WHO**, 2021. WHO recommends groundbreaking malaria vaccine for children at risk. [online] Available at: <<https://www.who.int/news/item/06-10-2021-who-recommends-groundbreaking-malaria-vaccine-for-children-at-risk>> [Accessed 10 August 2022].
34. **Gavi**, Gavi Board approves funding to support malaria vaccine roll-out in sub-Saharan Africa. [online] Available at: <<https://www.gavi.org/news/media-room/gavi-board-approves-funding-support-malaria-vaccine-roll-out-sub-saharan-africa>> [Accessed 10 August 2022].
35. **MVI Path**, RTS,S is the first malaria vaccine recommended for broad use by WHO. [online] Available at: <<https://www.maliavaccine.org/malaria-and-vaccines/rtss>> [Accessed 10 August 2022].
36. **Novartis**, 2022. Contributing to the fight against malaria. Available at: <[https://www.novartis.com/sites/novartis\\_com/files/novartis-malaria-factsheet-2022.pdf](https://www.novartis.com/sites/novartis_com/files/novartis-malaria-factsheet-2022.pdf)> [Accessed 10 August 2022].
37. **WHO**, 2021, World Malaria Report 2021. [online] Available at: <<https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2021>> [Accessed 10 August 2022].

