

Data Science Catalytic Fund

Stronger data for better community health

With the support of a US\$15 million grant from The Rockefeller Foundation and an additional US\$10 million committed by the Global Fund, the Data Science Catalytic Fund (DSCF) aims to improve the collection and use of community health data in Rwanda, Uganda, Ethiopia and Burkina Faso.

Accurate and timely data is crucial to detecting and responding to disease outbreaks, including COVID-19. Without data, countries cannot know where or how rapidly a pathogen is spreading, and therefore cannot act to contain it. More nuanced, localized data drives improved public health interventions. It can also support front-line and community health workers to influence health outcomes in the population. COVID-19 has been a testament to the power of real-time data in the right hands.

Yet in many countries, the integration of community data into national health information systems is weak. Investments made by the DSCF will significantly bolster this integration, enabling the timely exchange of health information that will result in more effective and efficient health interventions. From urban centers to the remotest areas, every community counts. Data coverage needs to reach every last mile to ensure that no one is left behind.

The Global Fund, in collaboration with The Rockefeller Foundation, supports efforts to strengthen national health information and surveillance systems, and empower communities to effectively detect and respond to epidemics and other health emergencies. To do this, DSCF interventions include refining and deploying digital tools, ensuring interoperability, enabling a digitally-equipped health workforce, and increasing local capacities – all to track, inform, and support community-level health services that drive improved health outcomes in even the remotest communities.



The Global Fund/Carol Kamasaka



The Data Science Catalytic Fund at a glance

- Data is the foundation of a strong health system.** Across the world, the Global Fund invests in better information systems, working with countries and partners to collect critical data, including for key populations and communities, to ensure that our program impact reaches the last mile.
- Community health information systems (CHIS) are a key part of the digital infrastructure.** Investments through the DSCF will expand and strengthen community-level data systems to allow high quality data to not only flow up to decision-makers, but also to flow down to benefit community health actors.
- DSCF investments will support effective community-level data systems to strengthen pandemic preparedness and response (PPR).** Strong community health information systems and the capacity to collect and integrate timely data are crucial for countries and communities to detect and respond to COVID-19 and new emerging pathogens.

Working in partnership

Working with deeply embedded technology partners and with local leadership, the DSCF drives efforts to break down barriers and improve community health information systems.

To be effective, investments alone are not enough. The DSCF works with partners to develop innovative solutions for long-standing, complicated technology and systems issues. By combining financial resources with world-class expertise, technical assistance and capacity building are mobilized to assist public health authorities with their priorities, like making data systems interoperable – able to work together in a compatible way. Working with deeply embedded technology partners and with local leadership, the DSCF drives efforts to break down barriers and improve community health information systems.

The Tech Collective

The DSCF works with technology companies with strong track records and long-standing relationships in countries and with public health communities. It leverages public-private partnership approaches to create innovative solutions in countries and build a culture of effective data usage for community health. The DSCF has convened a global cross-sectoral platform – the Tech Collective – bringing together technology leaders such as Microsoft, Mastercard, Google and Orange, and innovators in digital health such as Zenysis, Dimagi, and Living Goods.

These efforts have been transformative as health systems respond to COVID-19, while also managing ongoing epidemics. For instance, the DSCF has helped in improving the use of laboratory data to respond to COVID-19 by combining previously siloed COVID-19 data systems in Rwanda, developing e-learning materials for health extension workers in Ethiopia, or facilitating the triangulation and use of data across systems. These interventions significantly improve the quality and efficiency of health responses and strengthen countries' pandemic preparedness.

Country leadership and ownership are critical to ensure the sustainability of community health information systems. In 2022, the Tech Collective will build on progress made in 2021 and continue to welcome new members to the collective, bringing solid relationships, expertise and experience to strengthen data systems and facilitate an even greater unleashing of the collective power of technology, resources, and capacity of the private sector.





Country investment plans

Burkina Faso

In Burkina Faso, the DSCF is supporting the country's roadmap for community health digitization. Part of this roadmap includes digitizing activities carried out by community health workers – known locally as *agents de santé à base communautaire* (ASBCs) – such as health promotion, prevention, care, and support. Moving from paper forms to digital platforms means that data gathered through these activities can be integrated with other data systems to build a more comprehensive picture of community health. This will make monitoring outbreaks and community needs more effective and timely.

The DSCF also fosters alignment across partners in country in refining a joint roadmap for community health digitization. Partners in interventions supported by DSCF include:

- **Living Goods**, a nonprofit with over a decade of experience in supporting digitally empowered community health workers and community health worker performance management.
- **Terre des hommes**, which has over 11 years of experience in developing, deploying and scaling up digital tools in primary health care centers. In Burkina Faso, Terre des hommes will provide technical assistance to the Ministry of Health and link up the community level with the primary healthcare level.

- **Dimagi**, who provide technical advisory support and quality assurance to the Ministry of Health in the configuration of the **CommCare** platform, a digital solution designed to improve the ease and efficiency of work for front-line health workers and community health workers.

In the design phase of the CommCare app, a human-centered approach was used to develop and tailor digital solutions to local contexts for community health workers and to align with national plans for community health. The deployment phase starts in early 2022. It will pilot in seven districts across four regions, 269 health facilities, 1,262 villages, and 2,524 community health workers. As part of the pilot and scale-up phases, the DSCF will support the training of community health workers and their supervisors, support the purchase and configuration of digital tablets, conduct data review meetings, maintain the CommCare server and applications, and run the software Help Desks.

In talking about the CommCare application, a community health worker in the Centre-Sud (Manga) health region noted that, “[using] this application will allow us to better carry out our activities for the benefit of our communities.”

Uganda

In Uganda, the broad objective for the Community Health Information Platform funded by the DSCF is to establish a comprehensive health database, from the community to the national level. The intention is to support community health workers in their activities and accelerate reporting of critical health information. As a key part of Uganda's Health Information and Digital Health Strategy, this will strengthen community health systems and improve preparedness for future pandemics.

Uganda has several partners implementing digital health tools in the community, so a stakeholder mapping was carried out to ensure there was no duplication of efforts or resources. Supported by partners, Uganda's Ministry of Health and Division of Health Information will focus on scaling up the **Community Health Information System (CHIS)** powered by the Community Health Toolkit (CHT), an open source, global public good.

Deployment of the tool will help community health workers – village health teams – deliver integrated health services like reproductive, maternal, newborn and child health (RMNCH), as well as initial responses to infectious diseases including HIV, TB and malaria, in addition to disease prevention. The CHIS will be used to achieve full digital coverage across districts. The final selection of districts and village health teams is currently in progress.



“The DSCF and partner initiatives are harnessing their potential and existing capacity to deliver digital services at the community level. Leveraging their presence and experience in implementing digital tools in the community, partners have aligned with Uganda's national development plan and health sector strategies to respond to the need for digital transformation in the next five years.” Carol Kamasaka, Digital Health Specialist in Uganda's Ministry of Health.





Rwanda

In Rwanda, this initiative aims to strengthen community health monitoring and will support the development of electronic medical records for community health workers and health posts through the roll-out of a new **Community Health Information System (CHIS)**. This will be locally developed, patient-centered, and connected to health facilities' electronic medical records. It will enable community health workers to report directly and in real-time, which will provide reliable and timely data to support the effective detection and response to disease outbreaks like COVID-19.

In addition, by gathering all data in the same reporting system, this new tool will improve performance, reduce errors, and ensure sustainability through cost savings in training, mentorship, supervision, and reporting. When in place, the CHIS should replace the current community health worker information system (SISCOM), which is a stand-alone system.

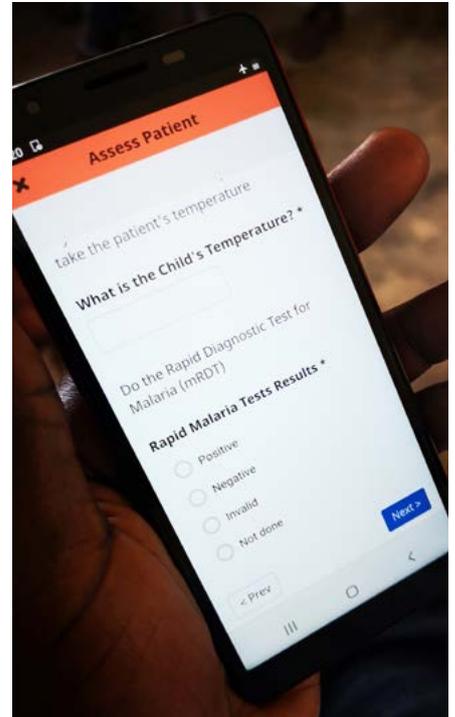
The new Community Health Information System aligns with national digitization priorities that includes setting up unique patient IDs and an interoperability framework based on the Health Information Exchange system. Scale-up of the new system will be gradual and will start with three pilot districts, but the overall aim is to reach all of Rwanda's 60,000 community health workers.

Ethiopia

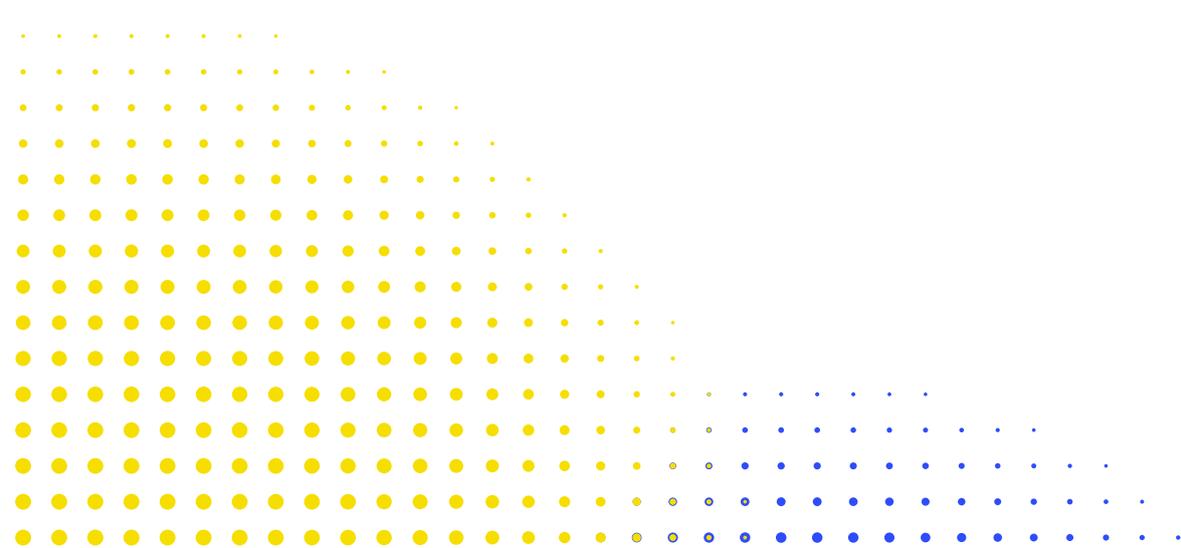
In Ethiopia, the DSCF initiative is supporting the Ministry of Health's Information Revolution agenda and continued scale-up of the electronic **Community Health Information System app**, which is built on the CommCare platform and will support community health workers (known as Health Extension Workers in Ethiopia), health managers, and other health care providers to easily and efficiently access individual and household data to deliver tailored health services to the communities.

The electronic Community Health Information System app is designed with the aim to assist Health Extension Workers in their activities, capture data on the Health Extension Program, and then use this data to inform the planning of interventions and thus improve community health. The app will focus on families; reproductive, maternal, newborn and child health; disease prevention and control; and logistics supply and management.

With support from the DSCF across the three-year implementation plan, training will be provided from the local to the national level to help improve data quality and bolster Health Extension Workers' capacity to collect, analyze, and use data, thus promoting a culture of data use at the community level.



The Global Fund/Carol Kamasaka





Looking ahead

Never has it been more urgent, yet more possible, to accelerate progress in digital health. COVID-19 has challenged current systems and revealed gaps that need to be addressed. Critical data must be available at the right time to make evidence-based health decisions. This requires investments in resilient and sustainable health systems, which, by default, must include information systems that track service delivery from the national to the community level. In alignment with the Global Fund's Strategy for 2023-2028, digital health will continue to play an increasingly important role in the Global Fund's broader mission and fight against HIV, TB and malaria. It will also be crucial for strengthening disease surveillance, preparing for and responding to pandemics.

Building on current successful efforts, upcoming assessments and learnings from Burkina Faso, Uganda, Rwanda and Ethiopia, the DSCF will continue to catalyze digital health transformation. These promising examples enable the DSCF to share best practices so that countries can learn from each other's experiences. The DSCF will also accelerate the way countries supported by the Global Fund allocate resources in future funding cycles to support digitalization and data use for community health.

Building momentum

We need to keep up the momentum and effectively support countries to build resilient and sustainable systems for health. In addition to financial investments, cross-sector partnerships will continue to play a crucial role. Tech Collective members recently reaffirmed their commitment to pool their unique talents, deep relationships and successful track record in community partnerships to deliver more critical interventions for country health teams and local communities, and to implement their digital health data systems better and faster to utilize the full potential of digital services.

If we do not accelerate the digital health agenda and our collective ability to collect, collate, and use health information, we will not be safe from COVID-19, we will not end HIV, TB, and malaria, nor will we be better protected from the next global pandemic. Only with accurate and timely data can communities detect disease threats, identify what actions need to be taken, and effectively respond to these challenges.

As we progress towards the Global Fund's Seventh Replenishment fundraising conference in October 2022, the DSCF seeks additional funding and partnerships to continue to strengthen digital health data systems and pandemic preparedness in countries, including at the community level. As COVID-19 has demonstrated, the global population is interconnected – which means the quality of our data impacts *all of us*.

