

COVID-19
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Protecting the Community Health Workforce During COVID-19:

Getting PPE to the last mile



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 Community Health Impact Coalition

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ABBREVIATIONS

Africa CDC	Africa Centres for Disease Control and Prevention
ACT-Accelerator	Access to COVID-19 Tools Accelerator
AMSP	Africa Medical Supplies Platform
AU	African Union
CGD	Center for Global Development
CHAI	Clinton Health Access Initiative
CHAP	Community Health Acceleration Partnership
CHIC	Community Health Impact Coalition
COVID-19 ESFT	COVID-19 Essential Supplies Forecasting Tool
CHW	Community health worker
C19RM	Global Fund COVID-19 Response Mechanism
DRC	Democratic Republic of Congo
Gavi	Gavi, The Vaccine Alliance
NGO	Non-governmental organization
PPE	Personal protective equipment
TB	Tuberculosis
WFP	World Food Programme
WHO	World Health Organization

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Photo Credit: Homeline Media

Protecting the Community Health Workforce During COVID-19: *Getting PPE to the last mile*

Community health workers (CHWs) play a vital role in health service delivery, especially in countries with less resilient health systems. During any outbreak CHWs are relied on to help control the spread. However, they are often the last in line to receive necessary health products and protective equipment, which affects their ability to safely serve their communities.

COVID-19 Action Fund for Africa (CAF-Africa) formed in June 2020 to meet an urgent need to get personal protective equipment (PPE) to community health workers (CHWs).

When COVID-19 began to spread around the world, five organizations (Community Health Impact Coalition (CHIC), Direct Relief, the Community Health Acceleration Partnership (CHAP), Pandemic Action Network, and VillageReach) came together to form the COVID-19 Action Fund for Africa (CAF-Africa) to supply CHWs with personal protective equipment (PPE). CAF-Africa's objectives were informed by a rapid assessment¹ of PPE needs

for 900,000 CHWs across 24 sub-Saharan African countries. This assessment estimated 450 million units of PPE would be needed annually for CHWs, at a cost of \$100 million USD annually. Together, these CHWs serve an estimated 400 million people in Africa, often in the most remote areas. Supplying this volume of PPE to CHWs required radical collaboration among philanthropic, civil society, government and institutional partners.

THE IMPACT

As an emergency response effort, CAF-Africa was able to mobilize quickly to supply PPE on a larger scale than any one partner could have done alone. **Between June 2020 and May 2021**, we mobilized more than \$18.5 million in financial and in-kind contributions to procure and distribute 81.6 million units of PPE (including surgical and non-surgical masks, KN95 masks, gloves, eye protection and gowns) to nearly 480,000 CHWs in 18 sub-Saharan African countries.*



479,508
CHWs reached



81.6 million
units of PPE delivered



48%
cost savings



\$18.5 million
mobilized
(in donated and in-kind support)

18 countries²
received PPE

In 2020, CAF-Africa was the fifth largest procurement mechanism for PPE in the world and the third largest user of free cargo flights offered by the World Food Program (WFP) from August to December 2020 after UNICEF and World Health Organization (WHO).[†]

CAF-Africa's impact had a longer-term effect on strengthening health systems as well.² We shared our data and learnings in support of PPE access with Africa Medical Supplies Platform, Africa Centres for Disease Control and Prevention, UNICEF Supply Division and the Wellcome Trust and the Global Fund's 'Rethinking PPE' consortium. We also worked to encourage governments to officially recognize CHWs as essential workers in health service delivery.^{1,3} By working with country partners and governments to plan

*Angola, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Kenya, Lesotho, Liberia, Madagascar, Mali, Malawi, Mozambique, Nigeria, Sierra Leone, Rwanda, Uganda, Togo, Zambia, and Zimbabwe.

†Based on an independent analysis of global PPE procurement trends by Precision Global Health in December 2020.

for a nationwide PPE supply, CAF-Africa catalyzed reviews of CHW country registries and encouraged their inclusion in supply planning for COVID-19 response. This process not only helped update countries CHW registries, but also helped to build longer-term partnerships and collaboration between community health and supply planning sectors. This collaboration includes adding CHWs to priority planning for COVID-19 vaccines.

CAF-Africa has worked to ensure countries secure additional PPE support as part of the Global Fund COVID-19 Response Mechanism (C19RM). We also published a [set of global, regional and national recommendations](#) for PPE access in the short and long term to help guide future efforts. However, ongoing needs that urgently require support and investment include: technical assistance for quantification and updated CHW registries, integration of CHW needs into routine supply plans, last mile distribution and improved monitoring and verification of last mile commodity distribution.



Photo Credit: Denis Onyodi

LOOKING TO THE FUTURE



Photo courtesy of Direct Relief

At its inception, CAF-Africa was focused on getting PPE to countries as a stopgap emergency response; we hoped the pandemic would be controlled and other interventions led by multilateral institutions and governments would fill continued PPE gaps. However, one year after this initiative began, significant work still needs to be done to ensure PPE is getting to all the CHWs who need it.

The current state of the pandemic calls for a stronger emphasis on country level support to continue advocacy required to ensure CHWs are institutionalized and protected. This is particularly true in Africa, where less than 1% of the population is vaccinated.⁴

Global and regional actors must also continue their support. Sufficient funding has been a key challenge and philanthropic entities should continue providing catalytic support to protect CHWs. Rather than having hundreds of

non-governmental organizations procure small amounts of PPE for CHWs, these organizations should pool efforts. This could represent a significant opportunity for cost savings and economies of scale that translates into more product at the country level.

Going forward, CAF-Africa partners are building on lessons learned to opportunistically direct philanthropic support to supply PPE for CHWs.

And as we continue to monitor the ways that

low- and middle-income countries are impacted by the pandemic, we will also seek to assist those wishing to make financial or in-kind contributions by matching them with areas of need. *Note: CAF-Africa will continue to receive donations and procure supplies during this pandemic.*

More work needs to be done at the country and global levels to make sure CHWs are included in medical supply chains and have the support they need to do their jobs safely.

We thank our partners and donors for their support.



Photo Credit: Gabriel Mwila, AMREF

INTRODUCTION

In June 2020, these five organizations collaborated to meet short-term PPE gaps:

1. CHAP
2. CHIC
3. Direct Relief
4. Pandemic Action Network
5. VillageReach

Early in the pandemic the world experienced severe personal protective equipment (PPE) shortages, which led to rationing supplies and prioritizing who would get PPE and where it should be sent. Initial procurement and distribution of PPE focused on facility-based COVID-19 care and isolation centers, leaving a large gap among front-line health workers at the community level.³ Global efforts to ramp up production and distribution of PPE began in spring 2020, with the launch of the [Access to COVID-19 Tools \(ACT\) Accelerator](#) and the Africa Medical Supplies Platform ([AMSP](#)). Several funders, such as The Global Fund, Gavi, the World Health Organization, New Partnership for Africa's Development and the World Bank, supported countries in repurposing and accessing new funding to address the PPE shortage. Yet access to these sources took time and community health workers (CHWs) on the front lines of the pandemic were not a priority.

Against this backdrop, the five organizations realized an opportunity to build a philanthropic, private and agile collaboration that could meet short-term PPE gaps. Direct Relief, the Community Health Impact Coalition (CHIC), the Community Health Acceleration Project (CHAP), the Pandemic Action Network and VillageReach came together to form the COVID-19 Action Fund for Africa (CAF-Africa) in June 2020. We quickly leveraged a powerful network of individuals, organizations and governments to supply CHWs with PPE for at least three months, while hoping to influence countries to include CHWs in planning for PPE and other health products longer term.

CAF-Africa ultimately procured more than 81 million units of PPE, distributed to CHWs and other health workers across 18 African countries. This report summarizes why CAF-Africa was formed, its impact, key lessons for critical next steps in securing future health products for CHWs, and the processes involved in quantifying, procuring and delivering PPE to end users.



Photo courtesy of Integrate Health

BACKGROUND

CHWs' Role in the Health System

CHWs are often the first line of defense in response to public health crises and a cornerstone of routine primary health care across Africa. They provide interventions for common health conditions such as malaria, HIV, tuberculosis (TB), pneumonia, diarrhea and malnutrition, as well as preventive and primary care services for maternal, newborn and child health. Common curative tasks include integrated community case management (pneumonia, diarrhea and malaria treatment) and administration of injectable contraceptives and child vaccinations.⁶ In Rwanda, for example, CHWs treat 56% of malaria cases.⁷ Many African countries have insufficient health workforces to manage a large disease burden, and these shortages are even more pronounced in rural areas, where people typically have greater access to CHWs rather than formal health workers.

CHWs were integral to the front-line health response to the 2013-2016 Ebola epidemics, performing contact tracing, case detection, community sensitization, data collection and other roles.^{8,9} They have also been recognized as an important part of the COVID-19 response.¹⁰ One of the Africa Centres for Disease Control and Prevention's (Africa CDC) flagship COVID-19 programs in 2020 was the [Partnership to Accelerate COVID-19 Testing](#), which relied heavily on the recruitment of CHWs and, in some cases, volunteers to accelerate COVID-19 contact tracing and testing across the continent. Through this program, Africa CDC leveraged more than 17,000 CHWs to increase testing rates.



Photo courtesy of Lwala Community Alliance

The International Labour Organization published a standard definition of CHWs in 2008: “Community health workers provide health education and referrals for a wide range of services, and provide support and assistance to communities, families and individuals with preventive health measures and gaining access to appropriate curative health and social services. They create a bridge between providers of health, social and community services and communities that may have difficulty in accessing these services.” Limited adherence to this definition, however, as well as limited data and varied CHW roles, has resulted in the continued lack of proper quantification and integration of CHW cadres into national health systems.¹¹ CHWs are often poorly enumerated, remunerated and supervised; they lack representation in decision-making and tend to be concentrated in rural and more remote areas. As a result, they are literally last in line among health workers for health commodities and other supplies.

Protecting CHWs: The Launch of CAF-Africa

In early 2020, CHIC published “Priorities for the Global COVID-19 Response” to ensure CHWs contribute toward the COVID-19 response. This roadmap highlighted four immediate, targeted areas of investment to ensure the strong community health systems required for effective pandemic response:

1. **Protect** health care workers
2. **Interrupt** the virus
3. **Maintain** existing health care services while surging their capacity
4. **Shield** the most vulnerable from socioeconomic shocks¹²

Figure 1 highlights how vital it was to get PPE into the hands of CHWs quickly, because without protection, the other three priorities were impossible. As the COVID-19 pandemic worsened, however, there were severe global PPE

FIGURE 1:
Why Protect CHWs in the COVID-19 Response?



Source: Ballard M, Bancroft E, Nesbit J, et al. *Prioritising the role of community health workers in the COVID-19 response*. BMJ Global Health. 2020.

shortages and price increases of up to 300% for scarce supplies.^{13,14} With a novel virus, limited understanding of drivers of transmission and high mortality, the initial focus was understandably on treatment and isolation of confirmed COVID-19 cases in secondary and tertiary care facilities. In many low- and middle-income countries (LMICs), CHWs were left out of the initial PPE quantification efforts related to COVID-19—despite work that took them from household to household. The first WHO COVID-19 essential supplies forecasting tool (COVID-19 ESFT), published in April 2020, was limited to CHWs classified by International Standard Classification of Occupations (ISCO) and excluded hundreds of thousands of volunteer CHWs who do not meet the ISCO criteria but are relied upon to provide critical care in their communities.³ Meanwhile, CHWs were expected to maintain essential health services as well as to provide support to COVID-19 response efforts, including, in some settings, home-based care of COVID-19 patients.

A July 2020 report by Amnesty International highlighted PPE shortages in almost all of the 63 countries and territories surveyed, one-third of which were in Africa.¹⁵ There were also disturbing reports of retribution and firing, especially of temporary contract workers, if they demanded protection. The

impact of inadequate PPE supplies has been particularly devastating in Africa, a region already experiencing health worker shortages. The United Nations reported an estimated 203% increase in COVID-19 cases among health workers, between May and June of 2020, throughout Africa because they lacked access to PPE.¹⁶ As of March 2021, at least 17,000 health workers are thought to have died from COVID-19 globally; this is likely an underestimate considering limited data and the lack of reporting on health worker COVID-19 morbidity and mortality in most LMIC.¹⁷

The United Nations reported an estimated 203% increase in COVID-19 cases among health workers, between May and June of 2020 throughout Africa because they lacked access to PPE.

Not only were CHWs not being prioritized to receive PPE, but a lack of publicly available and updated registries on the number of CHWs operating worldwide limited global advocacy opportunities to mobilize action.



Photo Credit: Denis Onyodi

The \$100 Million Challenge

In March and April 2020 there were no guidelines on what PPE CHWs needed to continue serving communities during the pandemic, or how to best plan for PPE use. In June 2020, CHAP, CHIC and the Center for Global Development (CGD) rapidly scoped, quantified and validated annual PPE needs with government and civil society partners to protect an estimated 916,000 CHWs—of whom only 14% are salaried—in 24 countries that make up 80% of the population in sub-Saharan Africa. These 24 countries predominantly relied on CHWs for essential care based on input from community health advocates (e.g., Community Health Roadmap, CHIC members) and a literature review. The team estimated that these CHWs serve more than 400 million people, or approximately 40% of Africa’s population, and that approximately **448 million units of PPE are needed for annual protection.**¹⁸

FIGURE 2:
PPE Requirements for CHWs

Based on May 2020 costs, the annual PPE needs for the CHWs was estimated at a minimum of \$100 million, excluding last mile distribution costs, which are nontrivial for such bulky commodities. The full list of required PPE based on those estimates includes:



213 million
Disposable
surgical masks



100 million
pairs
Disposable gloves



1.6 million
Reusable gowns



3.7 million
Goggles or face
shields for eye
protection



130 million
Disposable
biohazard bags

This quantification should be considered a minimum requirement, as some CHWs may need N95 masks and other supplies to provide care (for example, to patients with active TB). CHWs also need hand hygiene supplies—ideally soap and water, as well as hand sanitizer when water is not available for hand washing.

The CGD analysis concluded with three key recommendations to funders and development finance institutions:

- 1. Ensure PPE needs for CHWs are part of national PPE supply plans;** the associated annual cost of \$100 million is a fraction of the total financing for COVID-19 to date.
- 2. Deploy PPE for CHWs** alongside training, supportive supervision, data use and public communication to reduce stigma toward health workers.
- 3. Investigate opportunities for domestic and regional manufacturing** that may serve as optimal sources for basic PPE required for CHWs.

This quantification was published to spur an advocacy and resource mobilization campaign that would ensure CHWs were counted and included in PPE supply plans at country and global levels. At the time, clarity was

limited on how quickly existing procurement mechanisms such as The Global Fund and the UNICEF Supply Division would operate to meet these needs.

Building on [this quantification](#) and the [CHW priorities for global COVID response](#), the CAF-Africa partners came together to create an action-oriented, immediate response to addressing PPE shortages for community health workers. CAF-Africa launched in August 2020

with a \$10 million gift from Direct Relief (see Appendix A for the full list of partners). The goal was to address the gap identified by the quantification analysis through philanthropic support, pooling the PPE needs in 24 countries to drive down pricing and leveraging in-country government and community health partners to deliver equipment directly to CHWs.¹⁹

COVID-19 Action Fund for Africa launched in August 2020 with a \$10 million gift from Direct Relief and a goal of raising \$100 million to supply PPE to CHWs in as many as 24 African countries.



Photo Credit: Homeline Media

Key Assumptions

CAF-Africa launched with four key assumptions that guided its design and approach:

1. **Urgent action was needed to protect CHWs** who continued to provide essential services during the COVID-19 pandemic.
2. **A philanthropic, private collaboration moving quickly could meet short-term gaps** while other supply efforts spun up to meet longer-term needs.
3. **CHWs were not always included in quantification of equipment needed** due to a lack of clarity regarding the equipment needed for the services they provide, coordination among community health departments and logistics units, and varying degrees to which CHWs are recognized as a part of the health workforce.
4. **Countries would need support to extend their supply chains to reach CHWs during the pandemic**, because moving this volume of product to the community level was outside of the scope and scale of current supply chains.

Based on these assumptions, the CAF-Africa partners agreed to focus on rapid gap-filling deployment of PPE for CHWs, recognizing that longer-term, more sustainable responses would be needed.



Photo Credit: Bems Baruti



Photo credit: Homeline Media

CAF-AFRICA: THE IMPACT

As an emergency response effort, CAF-Africa was able to mobilize quickly to supply PPE on a larger scale than any one partner could have done alone. Between August 2020 and June 2021, CAF-Africa reached nearly 500,000 CHWs in 18 countries, delivering 81.6 million units of PPE, including surgical and nonsurgical masks, KN95s, gowns, face shields and eye protection).

FIGURE 3:
The Impact in Numbers



CAF-Africa exemplifies what is possible when like-minded organizations join forces for a common cause during an acute period of crisis.

As the only known effort that pools resources for PPE specifically for CHWs in Africa, CAF-Africa exemplifies what is possible when like-minded organizations join forces for a common cause during an acute period of crisis. They each put impact above their individual organizations. CAF-Africa was a significant contributor to addressing PPE needs in many countries in sub-Saharan Africa. CAF-Africa was the third-largest user of the World Food Programme’s (WFP’s) free user air cargo program through WFP’s Emergency Services Marketplace in 2020, following UNICEF and WHO. Having cash on hand and Direct Relief’s deep relationships with key PPE suppliers meant speedy procurement and supply were possible even during a severe global PPE shortage.

Three things have made the organizations in CAF-Africa successful in working together thus far:

- 1. Clear roles and responsibilities**, where each partner has a defined scope of work.
- 2. A collective commitment** for improvement.
- 3. Agreed-upon guiding principles** for CAF-Africa operations (described in the “Journey” section of this report).

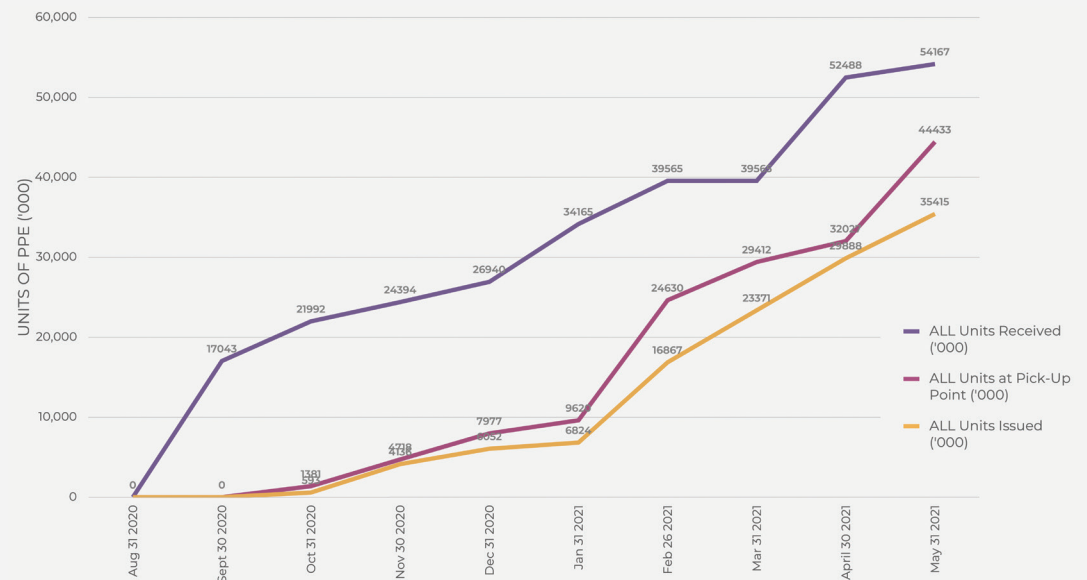
Last Mile Impact

When countries started submitting orders, the Supplies Working Group of CAF-Africa began tracking the order status, the receipt of product at the port of entry, the movement of product to the point of distribution and, lastly, the issuing of PPE to the CHW (described in the “Journey” section of this report).

Figure 4 shows the trend comparison of receipts of PPE to the distribution of the same to CHWs in all 18 countries from August 2020 to May 2021.

FIGURE 4:
PPE Distribution Timeline from Receipt to CHWs

The graph shows how in-country distribution lags behind the rate of receipts, pointing to last mile constraints that have to be crossed before CHWs receive PPE. The lag is mostly attributed to limited distribution capacity and bureaucracies described in the “Journey” section.



Despite the challenges, most PPE got to where it needed to be, and the PPE was considered good quality. Although actual usage varied in comparison to forecast needs, the variation was due to several key factors, including patient engagement levels, caseloads, guidance and training. For example, usage of surgical masks varied from being in line with the original forecast to double.⁵

At the time of our End User Verification survey, the proportion of CHWs reporting that they still had PPE available for their daily work ranged from 53% to 100%.

The availability of PPE for health care workers in general, and CHWs in particular, remains concerning. At the time of our End User Verification survey in April and May 2021, the proportion of CHWs reporting that they still had PPE available for their daily work ranged from 53% to 100%. The CHWs surveyed considered it a better alternative to have PPE than not, so they were willing to make the effort to get PPE. In most countries, CHWs had to collect PPE from supervisors or from the health facility, with average travel times ranging from 14 to 35 kilometers and 45 to 83 minutes. PPE pick-up was challenging

when CHWs needed to make additional trips to health facilities for different PPE items. Only in Democratic Republic of Congo (DRC) was PPE delivered directly to CHWs. Despite the travel distance and time, most CHWs reported that the process of collecting PPE was relatively easy in Mali (53%) and Malawi (70%). Factors that contributed to positive experiences included an easy and efficient ordering process with the local facility, regular availability of PPE and transparency in the ordering process.

Systems-Level Impact

Although CAF-Africa was set up as an emergency response venture, receipt of PPE has catalyzed and bolstered a range of system-strengthening activities. Civil society organizations that typically support CHWs in selected regions forged new partnerships with a wide variety of government and partner stakeholders to design national-level distribution and storage plans. In an effort to quantify CHW PPE needs for each country, we worked directly with national governments to assess the number of CHWs and how much PPE they would need per week. Determining the number of CHWs also will help countries ensure CHW PPE needs are included in future institutional grants and other resource mobilization efforts. At least nine CAF-Africa countries have shared that they plan to include PPE needs for CHWs in future grant proposals, including the recently released Global Fund COVID-19 Response Mechanism (C19RM).²⁰



Photo credit: Homeline Media

⁵ The Supplies Working Group conducted an End User Verification (EUV) survey in four countries: DRC, Malawi, Mali and Uganda. The survey sought to determine whether (1) assumptions regarding use of PPE matched actual use, (2) CHWs received PPE, and how they accessed it, and (3) CHW perceptions of the quality and suitability of donated PPE.

In final discussions with the in-country partners in eight of the 18 countries supported by CAF-Africa over the past year, all respondents confirmed that the CAF-Africa initiative helped raise awareness about CHW needs. This was highlighted specifically in Zambia where, on receipt of the CAF-Africa donation, the Minister of Health said, “The fight against COVID can only be won by protecting the CHWs.” In almost all responses, however, limited availability of funds from governments leaves a heavy reliance on donor funds as the main source of PPE for CHWs for the foreseeable future.

This collaboration raised CHWs' profile among national governments and helped reinforce the need for CHW registries. Recent evidence suggests that CHWs who are protected, equipped and paid maintained essential health services during COVID-19, even while they were heavily disrupted elsewhere.

But in order to equip CHWs, governments need to know, at a minimum, who they are, how many there are and where they are working. The need to prepare a gap analysis for CAF-Africa spurred countries to update registries, where they existed, proving critical for the imminent rollout of COVID-19 vaccines. PPE distribution for CHWs as an acute intervention has further demonstrated the importance of CHWs as part of resilient health systems and catalyzed agendas across all countries for CHWs to be officially recognized, compensated and supported.

The need to prepare a gap analysis for CAF-Africa spurred countries to update registries, where they existed, proving critical for the imminent rollout of COVID-19 vaccines.

ADVOCACY EFFORTS

In addition to the quantification exercise, CAF-Africa partner advocacy efforts helped raise awareness for ongoing CHW PPE needs. Between June 2020 and April 2021, the CAF-Africa Communications Working Group oversaw a media outreach strategy using social media ([@cafafricafund](https://twitter.com/cafafricafund)); regular blog posts (<https://cafafrica.org>); a newsletter; press releases; and earned global and regional media. By the campaign's end, 55 distinct media posts included press releases, blogs and publications. All created materials and earned media have been synthesized in a [Resource Overview](#) and are available at [CAFAfrica.org](https://cafafrica.org). We also collaborated with the Pandemic Action Network on a PPE advocacy brief: [The Next Pandemic Won't Wait: What World Leaders Can Do to Improve Frontline Access to Essential Personal Protective Equipment \(PPE\)](#).

The group also organized two key webinars with support from the CAF-Africa core team: a fundraising-oriented webinar on [September 30, 2020](#) and a webinar on CAF-Africa's impact, process and future on [April 8, 2021](#).

CAF-Africa actively engaged with other stakeholders to advance advocacy efforts related to PPE and generate interest in CAF-Africa. We were honored to be the grand prize winner at the 2020 Global Health Supply Chain Summit, which contributed \$1,000 to CAF-Africa. In May 2021, CAF-Africa was recognized as a finalist in *Fast Company* magazine's 2021 World Changing Ideas Awards for Pandemic Response.



Photo credit: Homeline Media

LOOKING TO THE FUTURE

As of May 2021, the COVID-19 pandemic is in its second year and continues to rage on, causing widespread, and likely sustained, health severity that propels the importance of a community-based health workforce. A study looking at data from January 2018 to September 2020 found that when CHWs are equipped and prepared for a pandemic, they are better able to maintain speed and coverage of community-delivered care during a crisis.³ We also know the reverse is true: When CHWs do not have the PPE they need to do their jobs, communities suffer. A WHO analysis from March 2021 in 14 countries found an average drop of more than 50% in outpatient consultation, inpatient admission, skilled birth attendance, treatment of confirmed malaria cases, and provision of the combination pentavalent

While CAF-Africa’s emergency response made an important impact, a large unmet need remains to ensure CHWs have PPE through the duration of the pandemic and beyond.

vaccine between January-September 2019 and 2020.²² Immunization coverage also dropped throughout Africa; 1.37 million children missed their bacille Calmette-Guérin vaccine, which protects against TB, and 1.32 million children missed their first dose of measles vaccine in 2020. This analysis also showed disturbing drops in antenatal care, facility births and postnatal care in Nigeria, with a corresponding increase in maternal mortality. CHWs play a critical role in mitigating the impact of this reduction in facility-based care.

While CAF-Africa’s emergency response made an important impact, a large unmet need remains to ensure CHWs have PPE through the duration of the pandemic and beyond. More than a year into the pandemic, and in the face of surging COVID-19 cases around the world, routine access to the most basic commodities for a pandemic response remains a challenge. Given this landscape, CAF-Africa commissioned an [independent strategic analysis from Krishna Jafa at Precision Global Health](#) to analyze how the original assumptions on which CAF-Africa was based had changed and the implications for protecting and supplying CHWs in 2021 and beyond.

The Precision Global Health analysis highlighted the following:

There is no single regional body that quantifies cross-country PPE needs, tracks pipeline, and aggregates needs and gaps.

- **The need continues for gap-filling PPE supplies that are specifically earmarked for CHWs at least through 2021 and maybe beyond.** This need can be filled through both funding and in-kind donations, although the latter will also need nontrivial funding for logistics and transportation.

However, with each successive and worsening wave of infection, Ministries of Health-controlled supplies continue to be understandably prioritized for treatment and quarantine centers and facility-based health workers. While regional efforts like the African Medical Supplies Platform (AMSP) continue to mature, other sources like The Global Fund's wambo.org platform are restricted to recipients of their funding. There is a lack of visibility into all sources of PPE funding for CHWs, and it is therefore challenging to determine if sufficient supplies are being delivered. Some key initial suppliers, such as the Jack Ma Foundation, have wound down their efforts.

- **The current state of the pandemic calls for a stronger emphasis on country level support.** In 2020, CAF-Africa focused on getting PPE to national capitals with the assumption this would be a stopgap arrangement, and CAF-Africa identified in-country partners to help distribute PPE to CHWs. Specific ongoing needs include technical assistance for PPE quantification, integration of CHW needs into supply planning beyond PPE, last mile distribution, and monitoring and verification of commodity distribution to intended end users.

- **Regularly updated and reasonably accurate CHW estimates are often unavailable at the country level.** While mixed levels of CHW professionalization and a lack of representation in decision-making are contributing factors, a lack of mechanisms for registering and monitoring the number and location of CHWs in the health system is an important root cause of variable and often inadequate inclusion of CHWs' health commodity needs—including PPE.
- **More than one year into the pandemic, limited visibility into PPE needs at the country and global levels continues.** There is no single regional body that quantifies cross-country PPE needs, tracks pipeline, and aggregates needs and gaps. The PPE market is fragmented: On the supply side, most PPE manufacturers are in Asia and require upfront cash payments and high volumes to secure low prices; on the demand side, buyers in LMICs are fragmented and forced to compete with better-resourced global players and countries—leading to inequitable distribution of PPE. Additionally, there are limited standards or support for PPE market access and distribution during an emergency. For example, while it's recommended that goods are procured from a mix of local and international suppliers, there is little to no support for domestic manufacturers to go through the registration process and prepare for certification.
- **Philanthropic support for PPE was fragmented and insufficient, and not many donors saw it as their specific priority.** Many of the donors that CAF-Africa engaged with voiced that they recognized PPE was important but

saw it as something that someone else was better positioned to support. As a result, the funding for PPE from both the philanthropic and institutional funding communities tended to be fragmented, with program-specific PPE written into some grants or investments, but without a comprehensive view on the full amount needed at all levels of the health system.

A Call to Action: Recommendations for Protecting & Supplying CHWs

CAF-Africa coalesced partners around a shared goal, and there is an opportunity to build on this momentum to accelerate professionalization and better link CHW needs in country and global supply chains. These efforts support current pandemic response by protecting CHWs today while setting up the mechanisms needed to protect in the future.

AT THE COUNTRY LEVEL:

- **Establish and maintain complete CHW registries, including government and NGO-supported CHWs.** CHW registries are important for ongoing and future quantification and supply planning exercises including for COVID-19 vaccine rollout, as well as to inform planning, training and deployment for future crises.
- **Include representation from community health directorates into supply chain technical working groups responsible for supply planning processes at regional and national levels.** Many countries have made commitments to integrate their CHW cadres into country primary health care networks in recent years. Realizing this commitment means integration of CHW supply usage and needs in comprehensive planning and projections during quantification and supply planning processes.
- **Increase visibility on procurements for CHWs by non-government actors.** Future efforts to improve PPE supply must include processes for integrating supplies purchased and distributed by NGOs and partners that may not be currently included in government planning processes. Some countries, like Liberia, created a process for doing this quickly and efficiently during COVID, and governments and partners can expand these efforts to include all supplies at the community health level.
- **Increase accountability and visibility for in-country supply chains to reach the community level.** There are several pathways for PPE to reach CHWs, but visibility and accountability are limited on what reaches them. In most countries, the closest health center acts as a distribution site for CHWs. This can create significant barriers for access, especially when commodities or supplies are bulky and/or when CHWs are far from health centers. Supply chain plans and strategies should include CHWs as a specific level of the health system to serve, and not as an afterthought in the planning and strategy process.

Many countries have made commitments to integrate their CHW cadres into country primary health care networks in recent years.

AT THE REGIONAL AND GLOBAL LEVEL:

- **Invest in strengthening the procurement options available to support countries to meet their PPE and other supply needs, during the pandemic and beyond.** The CAF-Africa experience showed the importance of funded demand in negotiating pricing and lead times, and also the importance of strong procurement capabilities and vendor relationships. These relationships and pooled mechanisms need to be cultivated and used outside of just pandemic response. Due to the constraints put on some of the global procurement mechanisms that could play this role (e.g., The Global Fund’s wambo.org platform being available to Global Fund recipients with their financing only), efforts such as AMSP have the potential to be significant players in addressing some of the constraints that countries and community health partners face in the global marketplace. Direct Relief remains a key partner for channeling donated goods, which is their usual model outside of pandemic contributors if supported and utilized. However, without a specific emphasis or earmark for CHWs, these partners and funding will remain insufficient in protecting CHWs.



Photo Credit Bems Baruti

- **Investigate opportunities and models to pool the philanthropic dollars going to medicines and supplies for community health.** Although CAF-Africa was the only pooled procurement mechanism for PPE focused on community health, hundreds of NGOs were procuring small amounts of PPE for the CHWs they directly support throughout the world. These efforts—often supported by private philanthropy and some by bilaterals—could represent a significant opportunity for cost savings and economies of scale that translates into more product at the country level. This could be done through an independent effort or by setting up a community health procurement fund at AMSP or another regional body with relationships to vendors and wholesalers. Governments and NGO partners that are individually procuring supplies and equipment on behalf of CHWs could use those select vendors and wholesalers to decrease their transaction costs.

At all levels, this is a critical moment for accelerating advocacy for CHW professionalization. Recent [WHO and UNICEF guidance on the role of CHWs in COVID-19 vaccination programs](#) and the focus on CHWs in [Africa CDC's Partnership to Accelerate COVID-19 Testing](#) provides continued legitimacy and urgency to these efforts. Using tools like the [Community Health Worker Assessment & Improvement Matrix](#), now is the time to step up the development of country-level plans and strategies that include a clear roadmap to professionalization specific to the country context. More broadly, professionalization of CHWs should be the global norm, with corresponding advocacy for policy changes, increased support, and resources to ensure countries are better prepared to prevent, detect and respond to pandemic threats while ensuring CHWs are properly protected and equipped.

Next Steps for CAF-Africa

CAF-Africa will continue procuring PPE for health workers through at least the end of 2021. In addition, CAF-Africa partners will continue to independently support existing institutional mechanisms set up to advance PPE access, such as VillageReach's engagement with the "Rethinking PPE" working group led by The Global Fund and Wellcome Trust, and CHIC members supporting countries in using the Global Fund C19RM mechanism to meet PPE and other supply needs. CAF-Africa partners will have the opportunity to go to Direct Relief for product donations.

We believe it's important there be a resource that can help connect interested philanthropic donors with critical areas of need.

CAF-Africa was designed as a stopgap, time-limited initiative to meet an urgent need and support Ministries of Health with plans for future procurements. The need for PPE continues in light of the ongoing pandemic and delays with vaccine rollout. Consequently, we believe it's important there be a resource that can help connect interested philanthropic donors with critical areas of need.

Going forward, CAF-Africa partners are building on lessons learned to continue in the spirit of a radically collaborative initiative to opportunistically direct philanthropic support to supply PPE for CHWs. And as we continue to monitor the ways the pandemic impacts LMIC, we will also seek to assist those wishing to make financial or in-kind contributions by matching them with areas of need.



Photo Credit Bemis Baruti

CAF-AFRICA: THE JOURNEY

CAF-Africa Structure

CAF-Africa core partners operated through an Oversight Committee, responsible for partnership management, operations, fundraising and communication. Each member committed to a designed role for the duration of CAF-Africa. The committee comprised representatives of the following core partners:

The Community Health Acceleration Partnership (CHAP) works to build stronger, more effective community health systems through catalytic investments and strategic engagement. CHAP operates with speed and flexibility, focusing on women, children and other underserved populations worldwide. CHAP is hosted by the WHO Ambassador for Global Strategy and supported by three philanthropists: Jeff Walker, Austin Hearst and English Sall. CHAP staff provided central coordination, partner management and fundraising support.

The Community Health Impact Coalition (CHIC), composed of implementing partners in more than 30 countries (including 24 in sub-Saharan Africa), exists to make professionalized CHWs the norm worldwide. During COVID-19, CHIC has played a critical role in mobilizing hundreds of partners to aggregate research, rapidly produce and disseminate research and protocols on the roles and needs of CHWs in the response,²³ and pool resources for the quantification and procurement of essential supplies. In addition to forming the backbone of the initial CAF-Africa country outreach, CHIC partners worked with a cohort of community health implementing partners to support external communication and fundraising.

Direct Relief is a humanitarian aid organization, active in all 50 U.S. states and more than 100 countries, with a mission to improve the health and lives of people affected by poverty or emergencies. Since January 2020, Direct Relief has sent 10,000 deliveries with over 5 million units of PPE to all U.S. states

and territories and 73 countries. Direct Relief also launched the private COVID-19 Fund for Community Health in the United States, providing \$28 million to nearly 1,000 community health centers and free clinics. Direct Relief led PPE sourcing and procurement, fund management support and committed \$10 million in anchor funding to support CAF-Africa.

Pandemic Action Network drives collective action to bring an end to COVID-19 and to ensure the world is prepared for the next pandemic. The Network consists of more than 120 global multisector [partners](#) working both publicly and behind the scenes to inform policy, mobilize public support and resources, and catalyze action in areas of acute need. Partners are aligned in a belief that every effort we make in the fight against COVID-19 should leave a longer-term legacy that better prepares humanity to deal with outbreaks and help prevent another deadly and costly pandemic. Pandemic Action Network provided fundraising and advocacy support for CAF-Africa.

VillageReach is a nonprofit organization that transforms health care delivery to reach everyone, so that each person has the health care needed to thrive. We develop solutions that improve equity and access to primary health care. Our work increases access to quality health care for 46 million people in sub-Saharan Africa. VillageReach led gap analysis verification and last mile distribution planning with countries that received CAF-Africa-funded PPE.

To manage the partnership, CAF-Africa established four working groups:

- 1. An Oversight Committee (OC)** directed by CHAP to manage OC engagement, synthesize knowledge and steward decision-making.
- 2. A Fundraising Working Group** led by the Pandemic Action Network with support from CHIC to secure donated and in-kind resources.
- 3. A Supplies Working Group** made up of Direct Relief, VillageReach and CHAP to facilitate the alignment of in-country needs and processes with Direct Relief's sourcing and procurement systems.
- 4. A Communications Working Group** managed by CHIC with support from a dedicated consultant and CAF-Africa partners.

CAF-Africa agreed on two objectives: (1) fund supplies to protect community health service delivery, and (2) elevate needs required for community health service delivery.

CAF-Africa agreed on two objectives: (1) fund an urgent unmet need in the COVID-19 backdrop: supplies to protect community health service delivery, and (2) elevate needs required for community health service delivery among government leaders and multilateral and private donors amidst COVID-19.

Operating Principles

Most of the core CAF-Africa partners had not worked together before. Consequently, establishing principles was critical to anchor and guide decision-making. These principles are:

- 1. Urgency:** We want to ensure CHWs are protected immediately to minimize disruption to routine, lifesaving care and to interrupt spread of COVID-19 (contact tracing, education/outreach, etc.); this is critical in the absence of dedicated funding to protect service delivery in community health settings.
- 2. Government endorsement:** This is essential for sustainability and coordination with other donation or purchasing programs.
- 3. Focus on community health:** We recognize this is an important part of the health system that is getting disproportionately less attention amidst COVID-19 while also being well positioned to minimize excess mortality with limited resources.
- 4. Collaboration:** We recognize that many efforts are underway to support a variety of needs during unprecedented times. This effort seeks to complement and strengthen existing efforts, minimize risk of redundancy and address unmet needs.
- 5. Flexibility:** Price volatility and uncertainties related to last mile distribution and supply planning capacity across countries mean that it is not possible to restrict CAF-Africa resources for PPE items only. These resources can be used to strengthen last mile distribution, extend duration of procurement and/or add other countries.

Partnerships

The core team relied heavily on partnerships to verify actual needs, plan last mile distribution and strategize on fundraising, and to do so with the endorsement of Ministries of Health to ensure that donated products filled unmet needs based on a country's national supply plans and existing resources. We leveraged working relationships forged to complete the quantification to move forward with scoping actual orders.

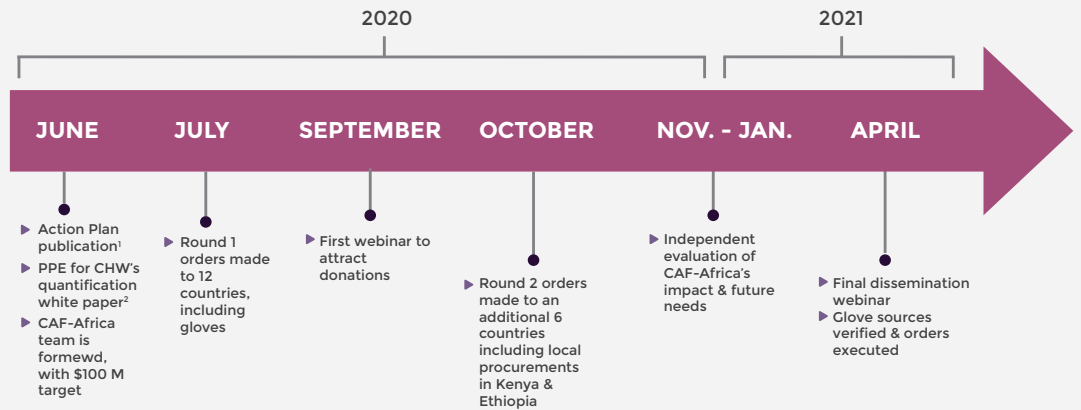


Photo Credit: Stephanie Rapp, Muso

Collectively, more than 30 organizations and 18 African governments (see Acknowledgments) supported CAF-Africa. We also shared information and coordinated closely with the other global and regional COVID-19 supply efforts, including the WHO COVID-19 Supply Chain System, the World Food Programme Emergency Services Marketplace, the African Union and Africa CDC to avoid duplication of efforts.

FIGURE 5:
CAF-Africa Timeline

Key milestones of the CAF-Africa journey. The CAF-Africa Oversight Committee and in-country partners started collaborating in June 2020 and final orders were placed in April 2021.



1. <https://gh.bmj.com/content/5/6/e002550>

2. <https://www.cgdev.org/publication/protecting-community-health-workers-ppe-needs-and-recommendations-policy-action>

The 18 governments that responded with interest to receive PPE for CHWs, as well as conducted and verified a gap analysis with CAF-Africa, were Angola, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Sierra Leone, Togo, Uganda, Zimbabwe and Zambia.

Resource Mobilization

Designed to mobilize philanthropic and other in-kind support to meet the urgent need to protect CHWs, CAF-Africa's impact was driven by generous donors who invested more than \$18 million in this radically collaborative opportunity. CAF-Africa's approach and strategic commitments created a high-leverage opportunity for philanthropists.

Philanthropic support for CAF-Africa was contributed through grants and online donations, as well as in-kind support for supplies and logistics.

DONOR SUPPORT

Philanthropic support for CAF-Africa was contributed through grants and online donations, as well as in-kind support for supplies and logistics. Direct Relief accepted funds on behalf of CAF-Africa, and the Oversight Committee and in-country partners provided pro bono programmatic support.

CAF-Africa partners are grateful to the individuals and organizations whose visionary support enabled this effort. A \$10 million commitment from Direct Relief and an initial grant from Crown Family Philanthropies in June 2020 anchored CAF-Africa. Representatives from CHAP, CHIC and its member organizations, Direct Relief and Pandemic Action Network actively participated in weekly fundraising working group meetings from July through December 2020. With an approach that reflected CAF-Africa's radically collaborative spirit, we worked together to identify and approach prospective donors, often coordinating outreach to make a stronger case for support. CAF-Africa received 17 donations with gifts of at least \$20,000, and more than 170 donors through online and mailed contributions.

Among these contributions was a strategic commitment made by the Skoll Foundation. Although the Skoll Foundation was not able to support the procurement of PPE, they were keen to support the in-country partners and the secretariat structure that enabled this effort to meet its objectives. We also realized early on that country teams were likely to require additional funds for last mile distribution. The Skoll Foundation provided a \$1 million gift to the effort, with \$650,000 going to support last mile distribution costs of the equipment after it reached the country. The remaining \$350,000 supported the Oversight Committee for Working Group leadership, partner coordination, technical assistance to country partners, monitoring and communicating impact, and advocacy for systems-level changes in how CHWs are supplied and protected now and in the future. This investment from the Skoll Foundation enabled other donor contributions to provide direct support for PPE procurement and delivery to port of entry.

Philanthropic donor responses to requests reflected an evolving sentiment. In the early stages (May 2020), responsiveness was greater in light of a perceived emergency. By the time the Fundraising Working Group launched in late June, many donors had already made emergency commitments for the pandemic. At the same time, it had already become clear that the pandemic was not going away anytime soon, particularly given new variants and the time required to manufacture and deploy sufficient vaccines for herd immunity. As fundraising began, we were already beginning to hear that donors were pivoting into longer-term strategies or refocusing on their core missions. In the view of some of our prospective donors, a sophisticated understanding of the longer-term systems change that is at the core of many CAF-Africa partners' approach seemed to be at odds with an urgent, short-term need for PPE. The potential of disrupted services and backsliding on progress toward health goals, a real concern addressed through the provision of PPE, was a challenging case to make—more so knowing that work must be done to augment and strengthen existing supply chains for CHWs. While the CAF-Africa team uncovered several systems-change themes, sustaining interest and momentum became increasingly difficult amid competing priorities in the context of rapidly evolving needs besides PPE: diagnostics, vaccines, treatments, oxygen equipment and an array of other necessities; not to mention ongoing needs for existing essential services such as routine immunizations.

TABLE 1:

Contributions to CAF-Africa

CAF-Africa mobilized more than \$18 million in cash and in-kind contributions to support the deployment of PPE. Additionally, partner organizations, including CHAP and Direct Relief, contributed an estimated \$1 million in dedicated staff time for operational support. Table 1 provides a breakdown by cash and in-kind support

CONTRIBUTIONS	PPE	DELIVERY	SECRETARIAT & FUTURE PLANNING
Cash gifts and grants	\$14,241,030	\$650,000	\$465,000
In-kind (estimated value or cost savings achieved)	\$336,921	\$3,036,852	\$1,000,000

IN-KIND SUPPORT

CAF-Africa received several in-kind contributions of PPE, shipping and other goods that allowed for cost savings of more than \$3.3 million. The World Food Programme provided free cargo flights to ship PPE from Asia to Africa, resulting in an estimated cost savings of at least \$3 million. In November 2020, Pandemic Action Network secured a donation of 15 million nonsurgical face masks and 1 million surgical face masks from BYD Care. The surgical masks were used to fill gaps while the nonsurgical masks went to DRC, Malawi, Mozambique and Zambia to support the army, police, schools and members of the community. Country governments vetted all donations before arrival. Additionally, the Fosun Foundation donated nearly 40,000 pieces of PPE (gowns, KN95 masks and eye protection).

More than 30 partners, including government stakeholders, provided in-kind programmatic contributions valued at \$1 million for program implementation, including last mile distribution. CAF-Africa's ability to move quickly depended entirely on leveraging existing in-country partnerships and resources. While these contributions have not been enumerated, they have played a disproportionately important role in ensuring procured commodities were delivered to intended beneficiaries. While we budgeted for all interested countries to receive some financial support for last mile distribution (predicted at \$40,000 per country), only seven ultimately requested contributions; others leveraged existing resources. Moreover, the funds provided to the seven countries complemented additional in-country resources that have not been enumerated. Country partners contributed resources to coordinate with other partners; supervise last mile distribution plans; conduct quality assurance of commodities upon receipt; scope distribution and storage options; and ensure training and tracking systems were in place. The Memorandum of Understanding describing the full scope of work that in-country partners agreed to support, leveraging existing resources, can be found in Appendix B.



Photo Credit Benedicte Waula, VillageReach

Procurement and Supply Planning

PURCHASING AND SOURCING

CAF-Africa prioritized three main commodities for deployment based on need and availability: surgical masks, face shields and gloves.

CAF-Africa prioritized three main commodities for deployment based on need and availability: surgical masks, face shields and gloves. VillageReach and CHAP liaised with the countries to verify gap analyses and needs, optimizing for national coverage and supporting country partners and governments to plan for nationwide coverage of CHWs. Most countries were able to plan for nationwide coverage with the exception of DRC, Nigeria and Uganda, where partners opted for a subnational scope due to either the ability to store and distribute or the funds available at the time to support purchases of PPE by CAF-Africa.

Between June 2020 and May 2021 Direct Relief sourced products in two rounds:

Round 1 (June-July 2020) consisted of 12 countries that responded immediately to the call for deployments: Côte D'Ivoire, DRC, Lesotho, Liberia, Malawi, Mali, Mozambique, Rwanda, Sierra Leone, Togo, Uganda and Zimbabwe.

Direct Relief used existing quantities of face shields in its warehouse and purchased additional face shields and surgical masks to meet the needs of these 12 countries with donated funds. Round 1 secured a six-month supply of PPE and was based on country responsiveness and completeness of information, including gap analysis verification with government endorsement, consignee information and last mile distribution plan commitments. Uganda was the exception, securing sufficient resources for three months' supply due to the volume of PPE for its targeted 80,000 CHWs.

We worked urgently to take advantage of free cargo flights offered by World Food Programme through their Emergency Services Marketplace. This service was originally set to end in August 2020 but was extended to October 2020. Direct Relief's first order included 28,637,040 surgical masks and 510,527 face shields secured at \$0.20 and \$0.55 per piece, respectively. These items were procured at 52% (surgical masks) and 74% (face shields) below the expected price in June 2020. Direct Relief also sourced 937,000 gowns and 486,000 N95s specifically for DRC, which had more primary care doctors than CHWs providing community health services.

Direct Relief sourced all products in Round 1 from vetted Asian suppliers that met required WHO quality standards and U.S. Food and Drug Administration requirements. All suppliers provided proof of inspection. Although we had hoped to source some supply from African-based suppliers, we were unable to identify any on the continent ready to produce PPE at the required scale and time frame. The team conducted discussions with several potential options in Ghana, Senegal and South Africa with support from the Tony Blair Institute for Global Change.

FIGURE 6:
PPE Ordered in
Rounds 1 & 2



Round 2 (August-September 2020) added six more countries: Angola, Ethiopia, Kenya, Madagascar, Nigeria and Zambia. Round 2 also included a new process to verify country commitment, including a nonbinding Memorandum of Understanding that describes expected responsibilities of different parties (the government, the in-country partner and CAF-

Africa partners). This memorandum also contained a narrative that describes the role of CHWs in the country and their PPE needs. We still had access to World Food Programme flights during this round, which gave us sufficient funds to purchase an additional 23,471,973 surgical masks and 118,401 face shields, sufficient for three months' need. For three countries that received imported masks, the negotiated price was reduced by a further 62.5%, from \$0.20 to \$0.073 (average price between multiple orders).

For three countries that received imported masks, the negotiated price was reduced by a further 62.5%, from \$0.20 to \$0.073

Round 2 included two purchases from suppliers on the continent. The surgical mask order in Ethiopia was the first from local suppliers, sourced from five suppliers that are part of the Hassawa Industrial Park: Antex, Epicet, Quadrant, Royal Medical Textile and TKBD. Big Win Philanthropies supported the setup of this transaction. CAF-Africa purchased surgical masks in Kenya from Alpya. Prices in both countries were competitive and on par with Asian suppliers. Quality was verified to be in line with national quality standards.



Gloves: The team had placed a glove order for Round 1 countries in July 2020 (47.4 million single gloves) from a Malaysian supplier. After six weeks, we were informed our glove order was postponed due to a global nitrile glove shortage. At the same time, a surge in COVID cases hit the Malaysian glove factories, resulting in shutdowns that exacerbated the supply issues. Since that first order was posted in August 2020, it took five attempts with multiple distributors and manufacturers to secure a reliable glove order, only possible nine months later in April 2021. Our order was relatively small compared to other sources, and we were constrained by the limited supplier landscape concentrated in Malaysia, Thailand, Vietnam and China. Attempts to order gloves through African distributors were not successful, as they were impacted by the same global shortages and timing delays. Prices increased by 18% between August and April, and free shipping ended. As a result, the number of gloves we ordered decreased to fit within the budget.

TABLE 2:
Key Global and
Regional Players in
PPE Procurement
and Supply

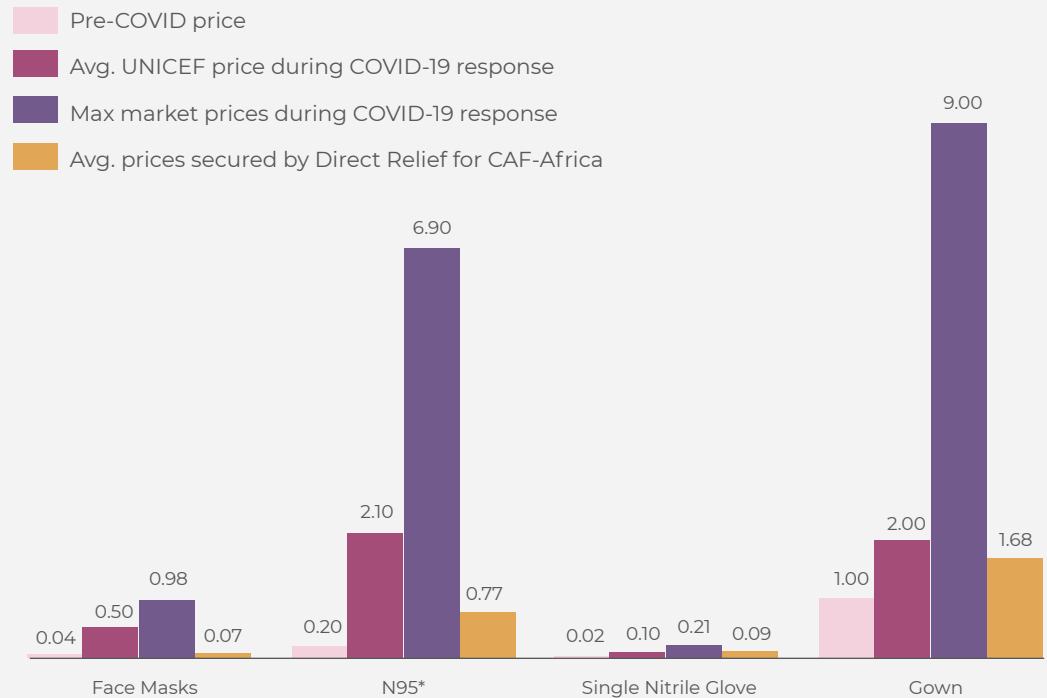
ORGANIZATION	PROCUREMENT PLATFORM	DESCRIPTION
UNICEF	UNICEF Supply Division	<ul style="list-style-type: none"> Complemented existing suppliers with 1,000 additional suppliers Maintains a demand forecasting dashboard
Direct Relief (CAF-Africa partner)		<ul style="list-style-type: none"> CAF-Africa procurement and logistics lead Key advantage: cash on hand Leveraged existing long term agreements with suppliers
The Global Fund	wambo.org	<ul style="list-style-type: none"> Orders: only Global Fund implementers registered via Global Fund pooled procurement mechanism Catalog access: other Global Fund implementers
Africa CDC	Africa Medical Supplies Platform	<ul style="list-style-type: none"> Registered purchasers only; shows available stock Key disadvantage: no cash on hand Unit cost: <ul style="list-style-type: none"> Surgical gloves: non-sterile \$0.07-0.12; sterile \$0.16-0.19 Surgical masks: \$0.06; 3-ply 0.14-0.57 (most expensive mask is made in Africa)
Alibaba, Jack Ma Foundation	Electronic World Trade Platform (eWTP)	eWTP Hubs in Addis Ababa (strategic partnership with Ethiopian Airlines), Kigali
World Food Programme	<ul style="list-style-type: none"> Direct Relief/CAF-Africa UNICEF Jack Ma Foundation Global Fund 	
Chemonics GHSC-PSM Project		<ul style="list-style-type: none"> Forecasting and supply planning tools and technical assistance PPE warehousing and distribution support Data analytics

Prices secured by Direct Relief were competitive with UNICEF prices. According to our analysis from July 2020, prices varied widely.

FIGURE 7:
PPE Prices in July 2020

Source for pre-COVID, average UNICEF and max market prices during COVID-19 response: UNICEF. August 2020: <https://www.unicef.org/media/82656/file/Global-COVID19-SitRep-10-August-2020.pdf>

PPE price references, in \$USD (July 2020 UNICEF reference)



DELIVERY AND DISTRIBUTION

Government leadership was critical to the successful delivery and distribution of PPE. In collaboration with the Supplies Working Group, governments supported CAF-Africa through:

1. Providing the necessary donation approval and confirmation of PPE needs.
2. Providing specifications of the PPE used in the health system and information on the PPE conservation factor; e.g., number of times/days PPE pieces could be used safely.
3. Exemptions for duty and payment of clearing fees: Several countries (Angola, Côte d'Ivoire, DRC, Malawi, Mali, Sierra Leone, Zimbabwe and Zambia) obtained the necessary approvals to ensure PPE was imported duty-free.
4. Central level, provincial and facility warehousing: Public sector central warehouses were used as the first point of delivery for PPE after it was cleared from the port of entry.
5. Last mile distribution costs: In most cases, existing government-led distribution processes were used to transport PPE to health facilities,

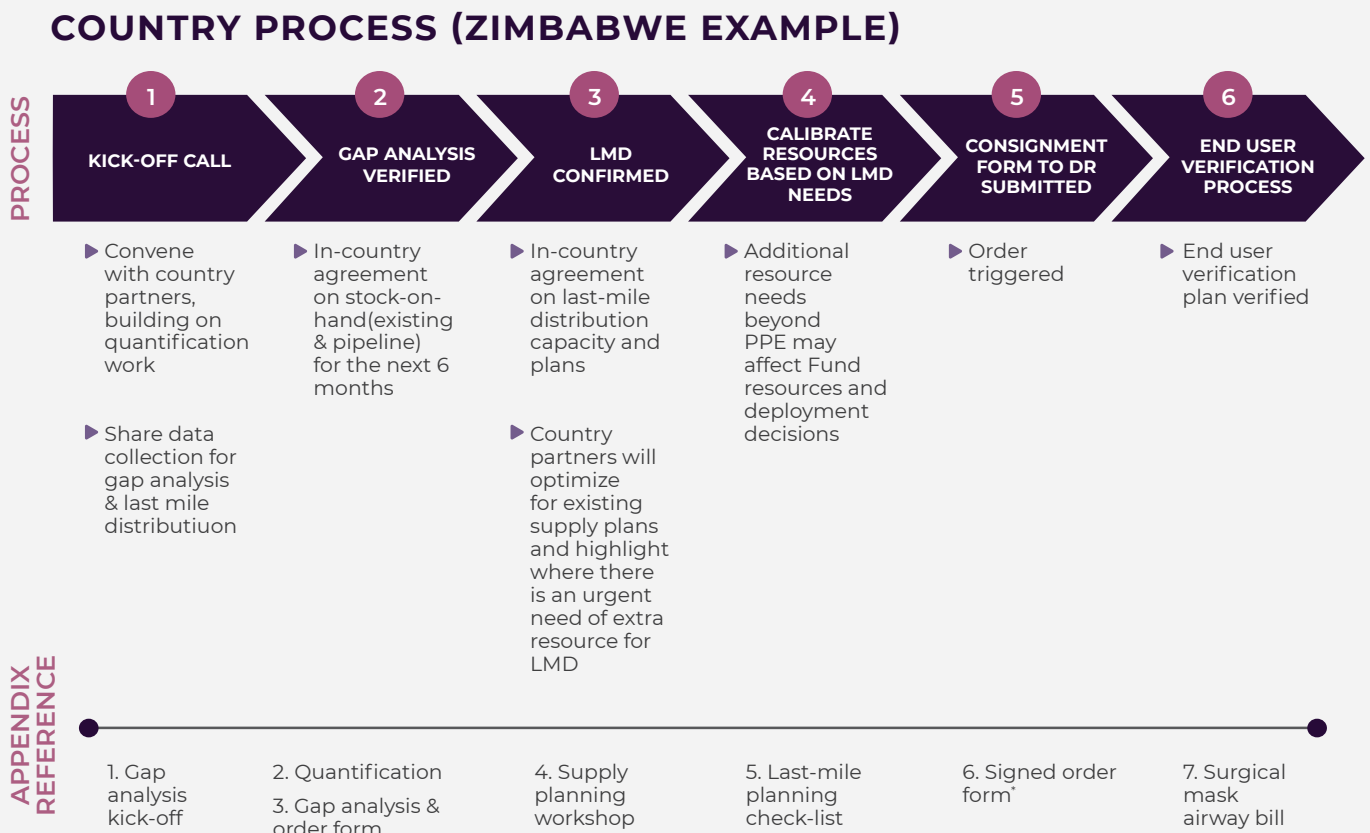
which served as pick-up points for CHWs in all the countries. This process included:

- Transportation of PPE from a central warehouse, generally located in the capital city, to subnational warehouses in outer regions/ provinces.
- Support for further transportation to service delivery points: e.g., clinics where CHWs would collect their allocation during routine monthly meetings; other checkpoints where CHWs would collect; or where CHWs had their supervisors (government employees) deliver PPE to them.

There are a few exceptions in countries like Mali, Sierra and Liberia, where distribution to the last mile was facilitated by in-country partners as part of their support to the government.

With government support, the Supplies Working Group developed a six-step process to procure, deliver and distribute PPE to CHWs. Some processes varied by country, but each of these steps is described below in Figure 8.

FIGURE 8:
Supplies Working Group Six-Step Process



* Note that the order form was submitted at the same time as last-mile distribution planning was happening

Tracking mechanisms were set up to monitor each commodity's journey from the manufacturer to the CHW pick-up point. To ensure visibility of product flows to a number of stakeholders and donors, we tracked the procured commodities at three levels: the first mile, the middle mile and the last mile.

FIRST MILE

To track commodities from their source locations, e.g., United States, China and Vietnam, to the ports of entry in each receiving country, we developed and used an Excel-based order tracker (see example in Appendix C). The PPE delivery process milestones we monitored were PPE quality and labeling and packaging; handoff to commercial airlines and the World Food Programme; and PPE receipt at each country's port of entry and notification of customs clearance.

CAF-Africa's efforts were successful due to collaboration at all levels. Along with the global collaboration of the core partners, each country also had an ecosystem of individuals and partners supporting the quantification, storage and distribution of the equipment.

In Sierra Leone, the CAF-Africa in-country partner and CHIC member, Partners in Health, coordinated efforts by UNICEF and the Ministry of Health (MOH) to quantify the needs of CHWs for two scopes of practice: 1) Routine support services for the different cadres of CHWs and 2) "Surge" services required to facilitate tracking and tracing as part of the pandemic.

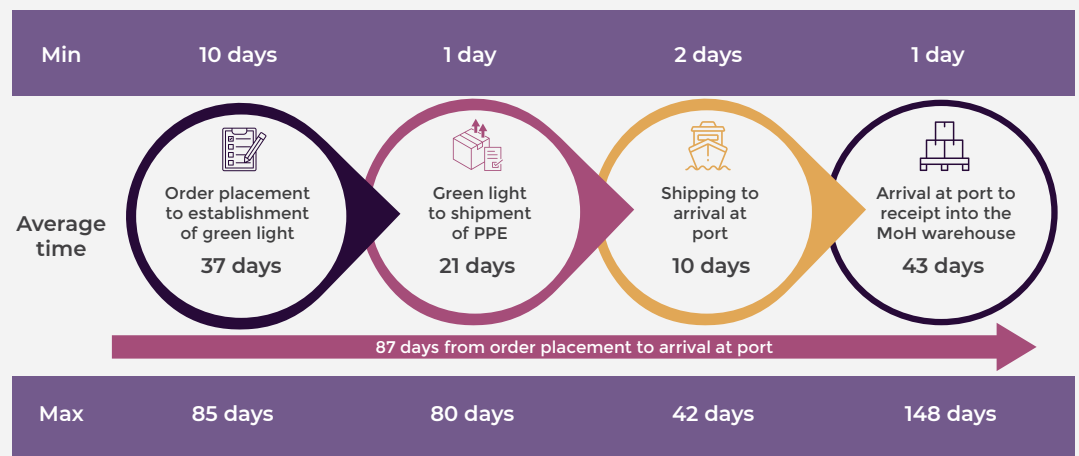
A national CHW registry maintained by the government was used to identify location, type and numbers of CHWs. The close collaboration facilitated early planning for the suitable storage of PPE prior to shipment and for the distribution plan in-country. UNICEF lent the use of a warehouse to the MOH to hold the CAF-Africa donation. The MOH in Sierra Leone, UNICEF and Partners in Health supported the nationwide distribution from the central warehouse to the district warehouse. UNICEF was able to consolidate PPE donated by CAF-Africa with hand sanitizer that was already scheduled for delivery to all districts. Partners in Health distributed PPE to CHWs on a monthly basis in the areas they supported. In districts that Partners in Health did not support, UNICEF conducted deliveries to service delivery points (care centers), where CHWs received six months' worth of PPE in one bulk allocation.

COUNTRY-LEVEL COLLABORATIONS: SIERRA LEONE

The Supplies Working Group tracked the average time at each step for procured commodities to reach a country’s main warehouse. Figure 9 shows the average number of days in four distinct stages, as well as the maximum number of days between stages to highlight outliers. Only surgical masks and face shields were included in this analysis.

The order-processing time varied widely, ranging from 10 days to 85 days to get the greenlight to ship PPE, and from 1 day to 148 days to move PPE from the airport to central storage facilities. Given that this was an emergency response supply chain, the number of days taken at “Max” illustrates that in some countries there were systemic capacity gaps around expediting approval, receipt and clearance of products. In emergency response supply chains, the rapid procurement mechanisms need to be matched with equally responsive order processing and management capacity. To prepare for future emergency response, it is important to develop supply chains that are resilient and agile to cope with stress elements like volume spikes. Also, process improvements are needed to ensure fast document processing and clearance.

FIGURE 9:
Average Time between PPE Order Placement and Arrival at National Warehouse



FACTORS AFFECTING TIMELINES

Order placement to establishment of “green light”

In the context of the CAF-Africa supply chain operations, order-processing speed was a function of two factors:

- **Existence of stakeholder consultation mechanisms in different countries.** Countries with established Supply Chain Technical Working Groups or other such stakeholder consultation mechanisms were able to get faster approvals from respective government departments. In-country partners that had prior supply chain experience, and existing

engagements with government departments that manage procurement and distribution, generally were able to obtain the necessary approvals more quickly.

- **Availability of data that enabled faster calculation of the “gap” in PPE needs.** Countries that had a national forecast to define the needs for the country put orders together more quickly. Countries with a logistics management information system (manual or electronic) that provided stakeholders with information on the PPE procured by a range of stakeholders were also faster to submit orders.

After an order was placed and a supplier had been identified, the Supplies Working Group collaborated with in-country partners to align the donation guidelines for the countries receiving the donations with the quality standards of the procured products. To ensure compliance with this requirement, sufficient information relating to the commodities (e.g., quantity, manufacturer, product specification) was provided to the receiving country to allow analysis of the products and to determine whether they met the country’s quality requirements. This approval process took an average of 37 days. The time varied greatly across countries, ranging from 10 to 85 days. This was owing to the differences in, and delays in provision of clear information of, documents required for the review.#

“Proceed to ship approval (greenlight)” to actual shipment of PPE

The average time during this phase was 21 days. Eighty percent of face masks were air-freighted at no cost to CAF-Africa through World Food Programme’s Emergency Services Marketplace, which they launched during the pandemic. While shipping through World Food Programme allowed CAF-Africa to pull more funds directly into procurement and resulted in a significant cost savings, this did require us to cede control of the delivery process to utilize the global logistics cluster capabilities. To make their process efficient, World Food Programme staged the products until sufficient volumes were aggregated to trigger flight bookings/charter, taking flight timing out of CAF-Africa’s control. However, World Food Programme also took on navigating the constantly evolving landscape of available transport options and special charter arrangements to circumvent border closures and to navigate a very complex global shipping environment. This was invaluable to CAF-Africa and allowed us to pool our limited resources with other humanitarian groups.

Ceding control of the delivery process to World Food Programme allowed significant cost savings and efficient shipping process.

Shipping of commodities to arrival at port

Several factors affected to the time it took for PPE shipments to reach country ports. COVID-19 resulted in fewer flight options due to the decrease in travel and border closings. Additionally, orders were split at international interchanges, forcing PPE batches to arrive on different days. Because gloves were the last commodity procured through CAF-Africa, and flight

Product specifications, certificates of analysis, inspection certificates from reputable quality assurance organizations before they could grant permission for Direct Relief to ship commodities.

costs escalated after World Food Programme assistance ended, we decided to ship some of the gloves by ocean freight. We expect a delay in shipping via ocean freight and overland transportation to entail 30 extra days of processing before the gloves reach the main warehouse.

Arrival at port to receipt of PPE into the MOH main warehouses

Customs processes posed a constraint to the flow of commodities into countries. While we addressed potential barriers to customs clearly by sending the customs clearing documents in advance, and submitting duty-free waivers with the MOH, delays still occurred. The delays were primarily influenced by:

- **Payment of storage, handling fees and taxes:** In DRC this delayed the port clearance procedures by as many as 50 days as the government approved the release of funds to cover airport taxes.
- **Changes in import regulations and a need to comply with new processes.** In Angola this resulted in customs delays of 148 days as stakeholders sought to comply with new government requirements.

LAST MILE

The Last Mile Distribution Tracker (see example in Appendix C) was designed to monitor the movement of PPEs from the middle mile (the receiving warehouse) to the last mile by looking at the number of PPE pieces (units) at the main receiving warehouse, at the secondary warehouse (provincial, regional) and at the final distribution point (pick-up points for CHWs). The goal was to track the commodities from the time they left the airport and were received at the central storage facility all the way to the end users. CAF-Africa worked closely with each MOH and its counterparts to develop country-specific distribution plans to track the commodities as they moved through the supply chain.



Photo credit: Benedicte Waula, VillageReach

After PPE was received at the central warehouse, several factors delayed distributing PPE to the last mile.

How supplies reached CHWs depended on the specific country's supply chain system design. For example in Malawi, Mali, Uganda, Zambia and Kenya, CHWs traveled to the nearest health facility to receive PPE. In Liberia, DRC and Sierra Leone (Partners in Health-supported regions), PPE was delivered directly to CHWs in their communities. After PPE was received at the central warehouse owned by either the government, an NGO or the private sector, several factors delayed distributing PPE to the last mile.

Delays at central-level facilities included:

- **Preparing distribution plans with in-country partners and getting necessary government approvals.** Even though this process started well in advance of the commodities shipped, there were always changes to be made after PPE was received. In many instances these changes involved reprioritizing which health workers were to receive PPE.
- **Getting government budget approval to transport PPE.** Seven of the 18 countries required last mile distribution financial support. Others managed to secure support from other in-country sources (e.g., integrated PPE distribution with other donor funded activities).
- **Waiting for other PPE items,** since they did not always arrive at the same time due to global sourcing constraints.

After PPE was ready to leave the central warehouses, government-owned/ managed road vehicle fleets were used in most countries to distribute to primary health facilities that served as pick-up points for CHWs. Private sector distributors (Mozambique) or vehicle fleets managed by development partners (Sierra Leone) were used in a few countries. Alternative means of distribution were employed where possible for some of the hardest-to-reach areas. In the Équateur province in DRC, for example, drones transported gowns and masks to 12 of the hardest-to-reach health facilities. Canoes were used in other areas of DRC. Using the Last Mile Distribution Tracker, in-country partners and the CAF-Africa secretariat monitored on a weekly basis the volume of each PPE type distributed throughout each country. This identified bottlenecks in moving PPE to end users after it was received in the country. Some of the bottlenecks were:



Photo courtesy of Direct Relief

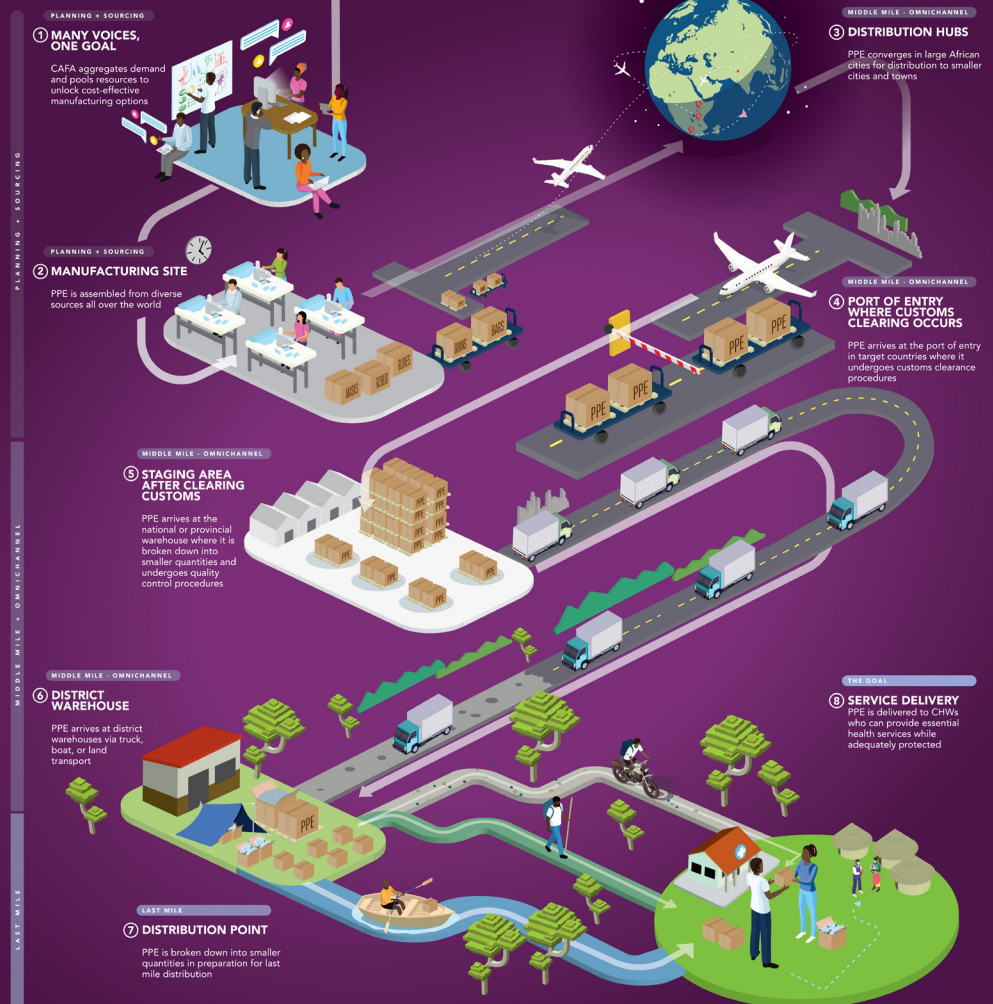
- Use of paper-based inventory management systems at the pick-up points (clinics, hospitals, etc.) delayed the reporting of distribution to CHWs.
- PPE consignments had to be distributed according to the country's distribution cycle for health products. For example, in Uganda commodities are delivered to health facilities according to a quarterly distribution cycle. PPE donated by CAF-Africa could be delivered only on this schedule. Additionally, after PPE reached the health facility, it was held until the CHWs were due to collect supplies. For example, in Mali, CHWs collected their PPE during quarterly meetings at their affiliated health facility.
- Other factors that affected last mile distribution, and the tracking thereof, were staff shortages due to COVID-19, country elections, strikes, and integration of CAF-Africa donated PPE with PPE from other sources.

COVID-19 ACTION FUND FOR AFRICA: A PPE INITIATIVE FOR COMMUNITY HEALTH WORKERS

The COVID-19 Action Fund for Africa (CAFA) is a collaborative effort supported by the organizations of the Community Health Impact Coalition (CHIC), the Community Health Acceleration Partnership, Direct Relief, and Pandemic Action Network to aggregate and address the unmet need for COVID-related supplies for community health workers across as many as 24

countries in sub-Saharan Africa that rely on these workers for urgent and routine essential care. The Fund will quickly match available donor-supported supplies with government-identified gaps to provide quality personal protective equipment (PPE) to community health workers on the frontlines of the COVID-19 response.

The process STARTS HERE



Implications for Future Implementers

Recognizing that CAF-Africa was designed as a rapid response effort with limited infrastructure, we had to constantly make decisions that balanced our core principles of urgency, government endorsement, focus on community health systems, collaboration and flexibility. Through this process, CAF-Africa developed some key considerations that we hope will impact future efforts aimed at procuring, supplying and distributing PPE to front-line health workers:

While many countries have processes in place to equip CHWs with basic commodities (through government or partner channels), visibility on stock needs is poor.

- 1. Poor visibility on last mile distribution systems:** While many countries have processes in place to equip CHWs with basic commodities (through government or partner channels), visibility on stock needs is poor. Stock management is often done manually through paper-based supply tracking. Manual consolidation of data at different levels of the supply chain prevents real-time decision-making or troubleshooting. CAF-Africa relied on trusted in-country partners to ensure delivery and verify the processes for last mile distribution. However, obtaining routine (e.g., weekly) information on stock distribution to CHWs remains a challenge. **Bottom line for future implementers:** Confront or accept the challenges related to verifying distribution of donated stock to the final recipient. Reporting may not be possible to the accuracy envisioned, or additional systems must be put in place to support tracking at the last mile.
- 2. Reliance on government endorsement may lead to alternative decision-making regarding product utilization:** All partners (nonprofit organizations and government liaisons) were committed to ensuring products would be prioritized for CHWs. Nevertheless, a rapidly evolving pandemic and uncertainty regarding PPE access resulted in a few cases of donated stock being used for clinicians in health facilities. **Bottom line for future implementers:** Accept uncertainty and be flexible particularly during outbreaks, when information changes rapidly. Following the government's preferences is important for sustainability and buy-in for future initiatives.
- 3. Working through existing government-led mechanisms is important even if they are not perceived as strong as partner-led systems:** We deliberately chose to channel donated products through government stakeholders to optimize for national scale and ownership. This meant accepting less control on in-country decision-making and processes in comparison with traditional grant-making mechanisms that channel resources through one in-country partner. This also meant adapting processes to accommodate shifting timelines. **Bottom line for future implementers:** Accept that working with a government will have process challenges; there might be delays, shifts and other bottlenecks to overcome. However, working with the government is critical if the objective is to strengthen existing systems versus reliance on vertical one.

APPENDIX A: FULL LIST OF CAF-AFRICA PARTNERS

AMP Health	Ministry of Health, Ethiopia
BRAC Uganda	Ministry of Health, Kenya
Clinton Health Access Initiative	Ministry of Health, Malawi
Community Health Acceleration Partnership	Ministry of Health, Togo
Community Health Impact Coalition	Ministry of Health, Uganda
Direct Relief	Ministry of Health, Zambia
Integrate Health	Ministry of Public Health, Democratic Republic of Congo
Last Mile Health	Muso
Living Goods	National Primary Health Care Development Agency, Nigeria
Lwala Community Alliance	Pandemic Action Network
Mentor Initiative (The END Fund)	Partners In Health
Ministry of Health, Mozambique	PIVOT Works Inc.
Ministry of Health and Child Care, Zimbabwe	Tony Blair Institute for Global Change
Ministry of Health and Sanitation, Sierra Leone	VillageReach
Ministry of Health and Social Affairs, Mali	
Ministry of Health and Social Welfare, Liberia	
Ministry of Health Côte d'Ivoire	

Thank You to Our Generous Donors

The following donors provided philanthropic contributions and grants of \$20,000 or more:

Amgen	Direct Relief	Medtronic Foundation
Bohemian Foundation	GlobalGiving	Skoll Foundation
Cartier Philanthropy	Good Ventures Foundation	The Tiffany & Co. Foundation
Center for Disaster Philanthropy	Jascha Hoffman Giving Fund	UBS Optimus Foundation
Community Health Impact Coalition (CHIC) and Focusing Philanthropy	IZUMI Foundation	The U.S. Charitable Gift Trust
Crown Family Philanthropies	Johnson & Johnson Foundation in collaboration with the Johnson & Johnson Center for Health Worker Innovation	

The following organizations provide generous in-kind contributions of PPE and transport:

BYD Care
Fosun Foundation
World Food Programme

We also thank hundreds of additional donors who made online contributions.

MEMORANDUM OF UNDERSTANDING BETWEEN THE MINISTRY OF HEALTH OF [COUNTRY], The COVID-19 ACTION FUND for AFRICA, AND [PARTNER NAME]

This Memorandum of Understanding outlines the roles and responsibilities of the Ministry of Health of [Country], The COVID-19 ACTION FUND for AFRICA and [Partner Name] regarding the donation, procurement, processing, receipt, and distribution of Personal Protective Equipment for use by Community Health Workers in [Country].

- A. The Ministry of Health of [Country] (MOH or the Ministry) is responsible for promoting the health of people in [Country] and ensuring that people who are sick receive needed care. MOH functions include Health Policy, Preventive and Promotive Health Services, Community Health Service provision, and Health Education. The Ministry allocates resources to health care delivery agencies and provides a framework for the effective and efficient procurement, distribution, management and use of health sector goods, works and services.
- B. The COVID-19 Action Fund for Africa (the Fund) is a consortium of non-profit organizations formed in June 2020 to protect Community Health Workers (CHWs) on the frontlines of Africa's COVID-19 response. The Fund aims to raise up to \$100M to supply Personal Protective Equipment (PPE or Donated Products) to CHWs over the next year. Led by an Oversight Committee (OC), the Fund matches donor-supported PPE with government-identified gaps and conducts end-use verification processes with in-country partners to document arrival and distribution of the supplies. The Oversight Committee is coordinated by the Community Health Acceleration Partnership (CHAP) and includes the following organizational leads on key functions: 1. Supplies – VillageReach 2. Communications – the Community Health Impact Coalition (CHIC) 3. Fundraising – Pandemic Action Network. Direct Relief is a leading OC member supporting all functions and notably procures, donates and transports PPE to the port of entry in support of this effort. The Supplies working group is led by VillageReach and will be the lead liaison for the MoH and the partner.
- C. [Partner] is a non-profit organization dedicated to improving the health and welfare for the population of [Country] and is engaged in activities designed to prevent and/or treat disease and to promote the delivery of quality health services. VillageReach aims to transform health care delivery to everyone by making sure products are available when and where they are needed and primary health care services are delivered to the most under-reached in sub Saharan Africa. Village reach works with governments, the private sector, and other partners to scale and sustain these solutions.
- D. In consideration of the foregoing, and as set forth below, the parties will work together to: (1) address the humanitarian needs of [Country] through Direct Relief's donation of PPE, which will be distributed to CHW who are eligible to receive the Donated Products; (2) adopt good practices to strengthen the integrity of the supply chain to safeguard the delivery of PPEs for the ultimate protection of the recipient populations; and (3) provide a framework for the efficient coordination of each party's complementary activities.

ARTICLE 1. - RESPONSIBILITIES OF THE MINISTRY OF HEALTH

5. Lead an initiative supported by relevant MoH stakeholders to complete a national gap analysis for PPE items and assess last mile distribution capacity.

6. Agree to prioritize protection for community health services as intended by this Fund.
7. Authorise donations after conducting a gap analysis that confirms the need for Donated Products.
8. Liaise with the Fund's Supplies Working Group on supply planning and distribution.
9. Keep relevant MoH units informed about the Donated Products and the plan for their distribution.
10. Provide duty free certificates for the Donated Products.
11. Oversee supply distribution to the last mile, including providing information required for reporting, publicity and communication.
12. Proactively manage any risks or concerns about PPE donations with the Oversight Committee.

ARTICLE 2. - RESPONSIBILITIES OF THE FUND

13. Support the Ministry of Health and [PARTNER] in the collection of information to quantify PPE needs for CHWs, conduct gap analyses, and develop initiatives to meet those needs.
14. Submit PPE orders to Direct Relief and manage communications on order processing and shipment.
15. Provide [Partner] with guidelines, information, shipping schedules, and other documentation:
 - (a) to enable Partner to prepare for in-country receipt and distribution of Donated Products;
 - and (b) to manage stakeholder expectations (amount and type of equipment ordered, weights, dimensions, date and means of arrival, etc.).
16. Share with donors and partners information on products procured for countries receiving PPE through the fund.
17. Provide technical assistance and advice regarding in-country distribution planning and execution.
18. Provide funds to support the cost of transportation or packing needed for effective distribution of Donated Products to health centres for pick up by CHWs if in-country donors and partners are not able to support these costs.
19. Communicate with [Partner] regarding in-country distribution process and end-use verification, including providing forms needed to confirm receipt and distribution of goods.
20. Identify and propose mitigation measures of quality, timely delivery, and effectiveness of the in-country distribution supply chains.
21. Conduct regular calls and meetings with [Partner] in order to monitor distribution progress

ARTICLE 3. - RESPONSIBILITIES OF [PARTNER]

1. Enter into and comply with the following terms and conditions for distribution and use of the donated PPE:
 - a. Partner shall provide all donated PPE strictly on the basis of need and without regard to race, color, religion, national origin, ancestry, age, sexual orientation, gender identity, marital status, disability, political affiliation, or other protected characteristic.
 - b. Donated PPE is solely for the uses set forth herein and will not be transferred by or to any third party for money, property, services, or any other remuneration of any kind.

- c. Partner shall abide by all applicable laws, regulations, and guidelines in the use and distribution of donated PPE.
 - d. Partner covenants and agrees that neither Partner nor any of its affiliates or any of their respective officers, directors, employees, agents, or representatives will offer, promise, or give any undue pecuniary or other advantage, whether directly or through intermediaries, to any public official, for that official or for any third party, in order that the official act or refrain from acting in relation to that performance of their official duties, in order to obtain or retain business or other improper advantage in the conduct of Partner's obligations.
 - e. Partner understands and agrees that in providing the donated PPE, Direct Relief does not act as a seller, reseller, or manufacturer for the purposes of products liability law or for any other purpose.
 - f. NEITHER DIRECT RELIEF NOR ANY OF ITS SUBSIDIARIES OR AFFILIATES IS RESPONSIBLE FOR ANY LIABILITY, CLAIM, LOSS, INJURY, OR DAMAGE CAUSED BY THE USE OF ANY DONATED PPE PROVIDED BY DIRECT RELIEF HEREUNDER NO MATTER WHAT MANNER THEY ARE USED IN. INDIVIDUALS AND ORGANIZATIONS WHO USE OR DISTRIBUTE THE DONATED PPE DO SO AT THEIR OWN RISK AND MAY SUFFER SERIOUS PERSONAL INJURY OR DEATH. DIRECT RELIEF MAKES AND HAS MADE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OR SAFETY OF ANY OF THE DONATED PPE, AND EXPRESSLY DISCLAIMS ALL SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. DIRECT RELIEF IS A CHARITABLE ORGANIZATION AND DOES NOT HAVE THE EXPERTISE TO INSPECT, AND THEREFORE HAS NOT INSPECTED, ANY OF THE DONATED PPE THAT IT HAS DONATED OR WILL DONATE TO PARTNER. NEITHER DIRECT RELIEF NOR ANY OF ITS SUBSIDIARIES OR AFFILIATES IS RESPONSIBLE FOR ANY LIABILITY, CLAIM, LOSS, INJURY, OR DAMAGE OF ANY KIND, INCLUDING LOSS OF PROFITS, INDIRECT, SPECIAL, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY OF THE DONATED PPE THAT IT HAS DONATED OR WILL DONATE UNDER THIS AGREEMENT.
2. Support relevant MoH stakeholders in completing the national gap analysis for PPE items and assessing last mile distribution capacity.
 3. Respond to requests from the Oversight Committee about supply planning and distribution.
 4. Coordinate national donations with other community health stakeholders to validate gap analysis and to plan and execute in-country distribution of Donated Products to the appropriate community health workforce.
 5. Ensure the relevant MoH units endorse the items donated and plans for their distribution, including written confirmation of the order submitted to the Fund (through a signature on the order form and distribution plan).
 6. Support in-country oversight of supply distribution to the last mile, including providing stories, photos, and data that may be required for reporting, publicity and communication.
 7. Notify the Oversight Committee of any risks or concerns about the donation program.
 8. As endorsed by the MoH, design and deploy communication tactics to raise awareness about the donation and support in-country fundraising efforts (if relevant).

ALL PARTIES warrant and represent that they have full right, power, and authority to execute this Agreement as specified herein.

This MOU is effective when signed by all parties.

THE MINISTRY OF HEALTH

.....
By: Name, [Title]

Date:

The COVID-19 ACTION FUND for AFRICA – Community Health Acceleration Partnership, Fund Coordinator

.....
By: Name

Date:

[PARTNER] The COVID-19 ACTION FUND for AFRICA – VillageReach, Fund Supplies Working Group lead

.....
By: Name, [Title]

.....
By: Name, [Title]

Date:

Date:

The COVID-19 ACTION FUND for AFRICA – Direct Relief, Lead on sourcing and procurement, Supplies Working Group

.....
By: Name, [Title]

Date:

APPENDIX C: CAF-AFRICA ORDER & LAST MILE DISTRIBUTION TRACKERS

The CAF-Africa Supplies Working Group developed two trackers that enabled monitoring of supply movements from the booked flight to the CHW pick up point:

The PPE Order tracker included 4 categories of information indicated below:

1. ORDER DETAILS	2. PROCUREMENT DETAILS	3. SHIPPING INFORMATION	4. LEAD TIME TRACKING
a. Product description (e.g., surgical masks, face shields)	a. Date procurement confirmed	a. Shipped date	a. # of Days Order Placed with Direct Relief (DR) to DR submitting order to supplier
b. Quantity (#s)	b. Source	b. Estimated arrival date	b. # of Days Order Placed with DR to Packing Confirmation with Supplies team
c. No. of pallets	c. Packing confirmed	c. Airway Bill number	c. # of Days between approved order and when DR request countries to verify packing & shipping details
d. Weight & Volume		d. Airport	d. # of Days it takes for country to respond to DR and verify go ahead
e. PPE Value \$		e. Arrival at Airport date	e. # of Days from when AWB is confirmed until Arrival at Airport
f. Freight costs \$		f. Airport arrival status	f. # of Days Order Placed with DR to Arrival at airport
g. Total value \$		g. Road courier	g. # of Days Customs Clearance
h. Distribution budget gap		h. Road destination	h. For those that arrived: # of days from order submission to receiving at warehouse
i. Customs duty payable		i. Road Estimated Day of Arrival	i. Pending orders: # of days since order placement
j. Order placement date		j. Delivered date to receiving warehouse	
		k. On time/late	

The Last Mile Distribution tracker included 10 categories each country partner reported on regularly.

For each item:

1. # of months stock ordered
2. Actual quantity ordered (# of units)
3. % of Forecast
4. Quantity received
5. Date received at main warehouse
6. Quantity received at main warehouse
7. # of days since receipt in country
8. # of months since receipt in country
9. Actual quantity received at CHW pick up points
10. % of PPE received at pick up points by CHWs

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