



Protecting the Community Health Workforce During COVID-19:

Personal Protective Equipment

Summary Deck

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Summary

- CAF-Africa partners: CHAP, CHIC, Direct Relief, Panorama/ Pandemic Action Network, VillageReach
 - Set up in April 2020 as a stopgap mechanism to ensure CHWs are protected with PPE, expecting that the COVID-19 pandemic would be contained
 - Rapidly mobilized 71M units of PPE to 18 African countries; relied upon in-country partners for distribution to CHWs
- As of March 2021: the pandemic continues, with new challenges: more transmissible variants are less susceptible to some vaccines
 - **CHWs continue to need PPE** to do their work, but are literally last in line
 - Some countries still struggle to quantify and prioritize PPE for CHWs
 - Ongoing need for gap-filling PPE procurement and supply for CHWs, but limited donor appetite to pay for this outside of institutional mechanisms (UNICEF, AMSP, WHO, etc.)
 - ACT-Accelerator 2021 Strategy & Budget shows \$6.2B shortfall for PPE procurement for frontline health workers “in contact with COVID-19 patients”
 - Public sector supply chains are stretched responding to immediate priorities (essential services and vaccine procurement/distribution) and need help for last mile distribution of PPE
- CAF-Africa undertook a strategic analysis of **needs**, including consultation with key informants at the global, regional and country levels.
 - If CAF-Africa decides to continue, 2021 calls for a **stronger emphasis on country level support**
 - Technical assistance for last mile distribution, monitoring and verification and integrating community health into supply planning
 - Gap-filling PPE supply earmarked for CH if/ where needed, including commodity donation
 - Build upon 2020 **CHW quantification** efforts particularly for countries with weakest capacity
 - Needed to ensure CHWs are included in vaccine rollout plans and for future inclusion in quantification and supply planning efforts
 - Continue **global advocacy** for CHW professionalization and **strengthen country-level advocacy**

What were the original assumptions when CAF-Africa started in May 2020?

1. **There was an urgent need to protect community health workers** providing essential services during the COVID-19 pandemic (evidence: [PPE quantification](#), [PPE for All](#))
2. **A philanthropic, private collaboration moving quickly could meet short-term gaps**, while other supply efforts spun up to meet longer-term needs
 - Other supplies efforts were in the process of getting started and it was not clear yet if these efforts would be sufficient or if they would prioritize community health specifically: Africa Medical Supplies Platform, UNICEF Supply Division, Global Fund, Jack Ma Foundation, PPE Consortium (WHO), NEPAD, and World Bank
 - PPE needs requested by governments to date seemed focused on facility-based care and isolation centers, leaving a gap for community level support
3. **Community Health Workers were not always getting included in quantifications of equipment needed** due to lack of clarity regarding the equipment needed for the services they provide, coordination between community health departments and logistics units, and varying degrees to which CHWs are recognized as a part of the health workforce (many are contractors or volunteers versus employees)
4. **Countries would need support to extend their supply chains to reach CHWs during the pandemic**, since moving this volume of product to the community level was outside of the scope and scale of current supply chains.

What was the scope of this engagement?

Precision Global Health joined the CAF-Africa team in November 2020 to help answer three questions:

1. Are the assumptions stated at the beginning of this work still valid? How has the landscape and the PPE needs of CHWs changed over time and what do we anticipate for 2021 and beyond?
2. Based on the data and evidence gathered above, what are the resources, partners, and governance needed to resolve broader PPE access challenges and ensuring CHWs continue to be protected?
3. How can the fund partners build on accomplishments to date to create a shift in how community health workers are protected and supplied in 2021 and beyond?

These findings and recommendations were developed through the following methods.

1. Desktop Research

- CAF-Africa program documents
- Peer and grey literature review
- Partner websites
- COVID-19 pandemic status reports: WHO, WHO/ AFRO, Africa CDC

2. Key Informant Interviews

CAF-Africa Core Partners

Name	Organization
Andrew Maccalla	Direct Relief
Bhupi Singh	Direct Relief
Carolyn Reynolds	Pandemic Action Network
Emily Bancroft	VillageReach
Gabrielle Fitzgerald	Pandemic Action Network
Jennifer Cho	Pandemic Action Network
Madeleine Ballard	Community Health Impact Coalition
Melissa West	VillageReach
Mila Nepomnyashchiy	CHAP
Tapiwa Mukwashi	VillageReach

External Partners & Experts

Name	Organization
Adham Effendi	World Food Programme Ethiopia
Alfons van Woerkom	Cross-donor group
Andrew Jackson	World Food Programme
Brighton Gambia	CHAI Zimbabwe
Iain Barton	CHAI
Katherine Hudak	Gavi
Maureen Amutuhaire	Min. of Health Uganda
Maziko Matemba	Global Fund CCM, Malawi
Moses Muputisi	Global Fund
Nagwa Hasanin	UNICEF
Ryan McWhorter	
Prashant Yadav	Center for Global Development
Solomon Zewdu	BMGF
Sumit Manchanda	IFC
Tanya Shewchuck	BMGF
Viviane Sakanga	AMREF Zambia

3. Validation & Dissemination

- Weekly desktop review refresh/ key informant follow up as needed
- CAF-Africa Leadership Team workshops
- Dissemination webinar (planned: April 8, 2021)
- Final report (planned: April 2021)

A highly iterative process from start to finish was critically important given the highly dynamic nature of the COVID-19 pandemic.

Why Protect CHWs in the COVID-19 Response?

PRIORITIES

1. **Protect healthcare workers; weaker health systems rely more on CHWs**

2. **Interrupt the virus; CHWs are vital for prevention, detection and response**

3. **Maintain health services while surging their capacity; CHWs are essential for both in LICs/ LMICs**

4. **Protect the most vulnerable from economic shocks**

DO NOW

CAF-A focus:

- Produce, deploy and restock PPE
- Include CHWs in PPE projections

- CHW COVID-19 response staffing and readiness protocol
- Train CHWs to prevent, detect and respond to COVID-19 (Africa CDC)
- Estimate testing need and supply tests

- Govts. designate CHWs as essential workforce (CHIC)
- National supply chains quantify demand, coordinate essential commodity and surge supplies distribution

- Cash to households
- Neighborhood plans to protect the vulnerable
- **Ensure CHW budgets include holistic support**

DO NEXT

- Work with governments to **pay CHWs** for supplemental hours






- Invest in ongoing **training** for community health teams

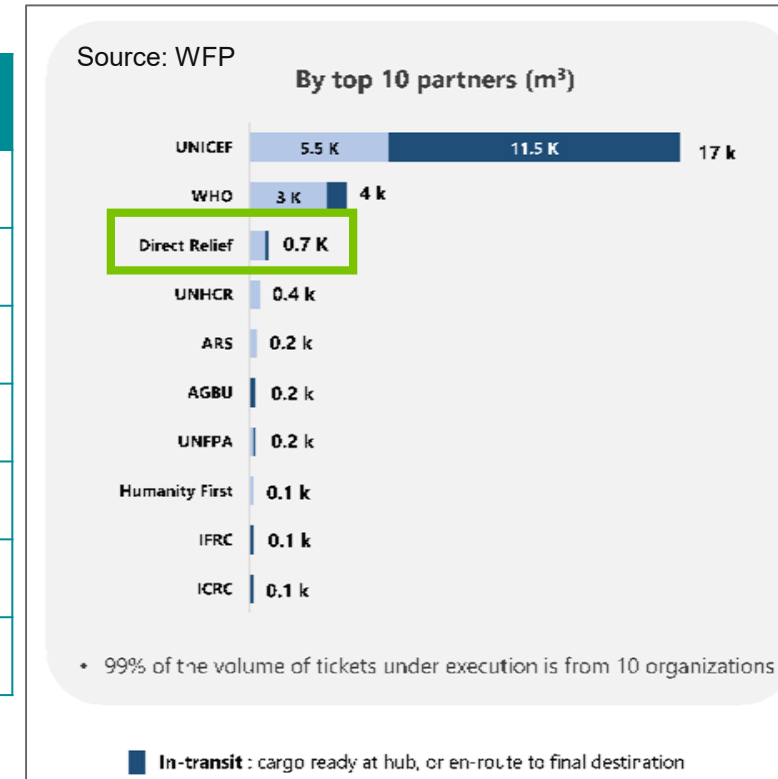
- Quantify need for expanded/ backup coverage, **recruit** needed CHWs and supervisors

- Multilaterals, development banks, govts. establish economic recovery initiatives
- Invest in emerging disease hotspot surveillance

In 2020, CAF-Africa was the only significant global player that specifically prioritized supplying PPE to CHWs.

CAF-Africa was the 5th largest global procurer and Direct Relief was the 3rd largest user of WFP's free-to-user service.

Commodity	World Bank	UNICEF SD	Global Fund (WAMBO)	Alibaba/Jack Ma	CAF-Africa
 Surgical masks		200M	73M	104.6M	
 N95 respirators		15.2M		1M	
 Gloves		143.2M	73M		
 Goggles		1M			
 Face shields		2.7M			
Gowns		6.8M			
Total	500M+	368.9M	146M	105.6M	87M+



There are several pathways for PPE to reach CHWs, but there is limited visibility and accountability on what reaches them.

CAF-Africa
 UNICEF: ICCM
 Global Fund: HIV/TB/malaria programs, HSS
 World Bank, GAVI: HSS including community level

Our Last Mile Distribution Efforts

CAF-Africa's PPE distribution efforts between August 2020 and March 2021 in response to COVID-19

18

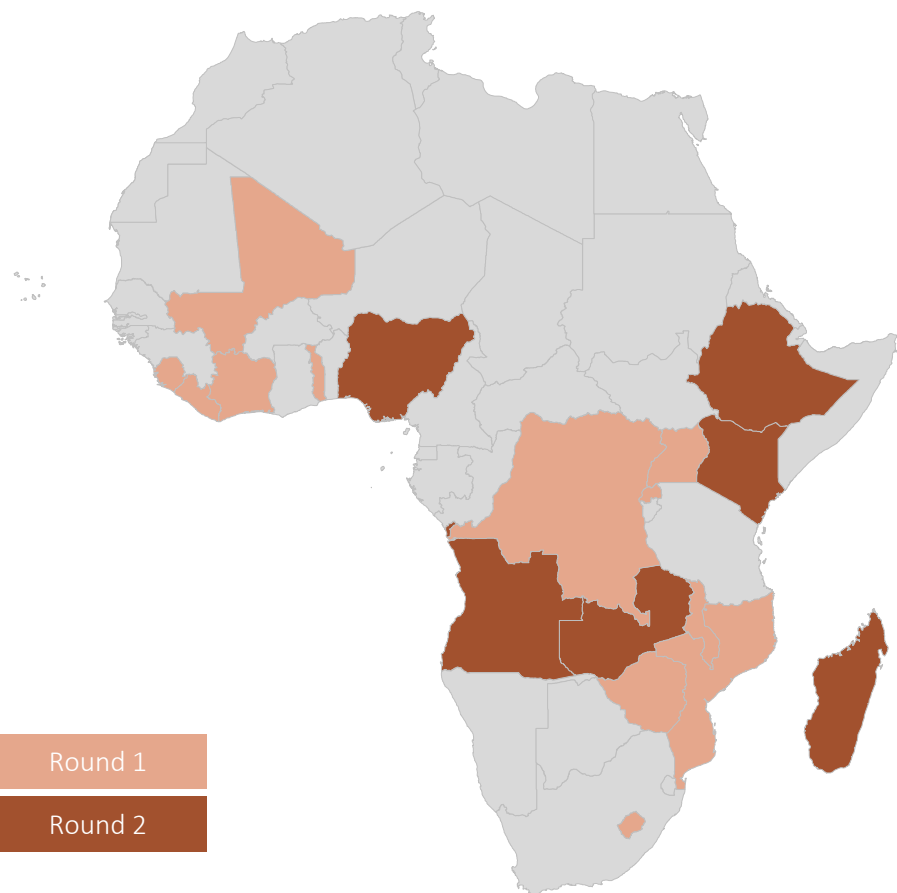
Countries

5

Types of PPE

473,544

Community Health Workers



Round 1

Round 2



Masks



Face Shields



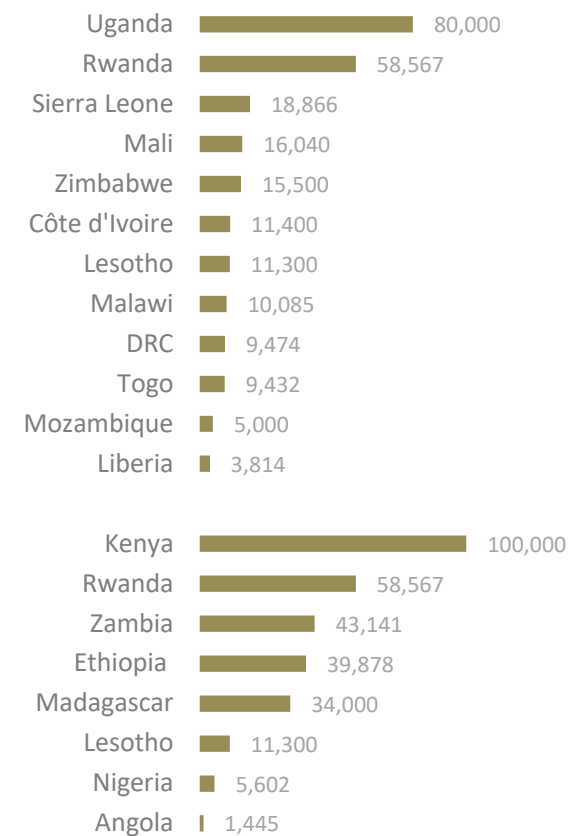
Gloves



Gowns



N95s

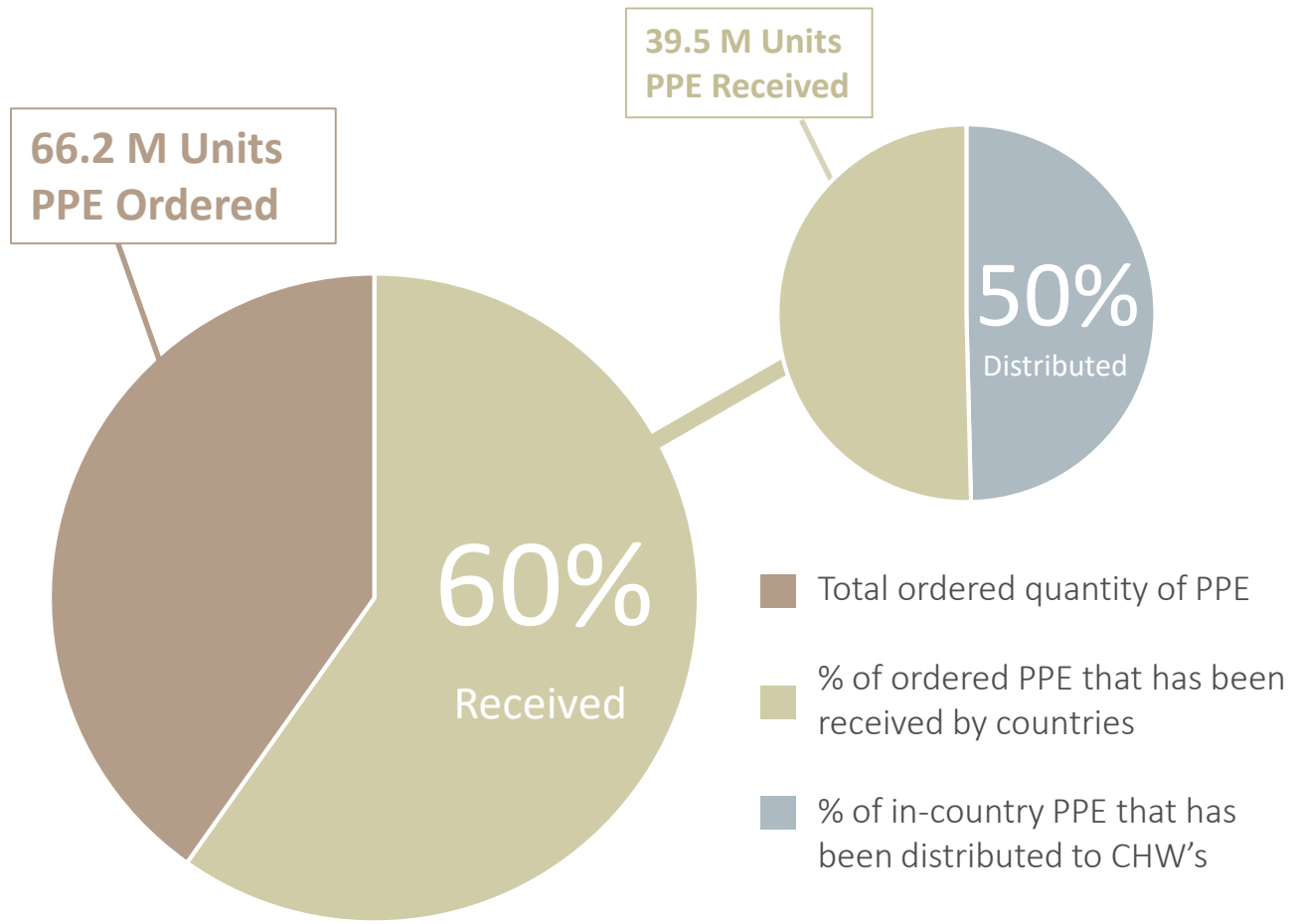


*Lesotho and Rwanda feature under both Round 1 and Round 2. Total number of CHW's does not reflect these countries twice.



How has overall movement of PPE performed so far?

Insight: CAF-Africa has placed orders for 66.2M units of PPE, representing 55% of 6-month forecasts for 18 countries. Countries have received 60% of the PPE that they ordered and have distributed 50% to Community Health Workers.



PPE Type	Order Totals	Total Quantity Received	Quantity Distributed
	49,783,300	37,216,000	18,180,365
	765,554	569,754	289,117
	14,697,534	320,525	320,525
	973,000	973,000	499,514
	486,000	486,000	338,608
Total	66,705,388	39,565,279	19,628,129

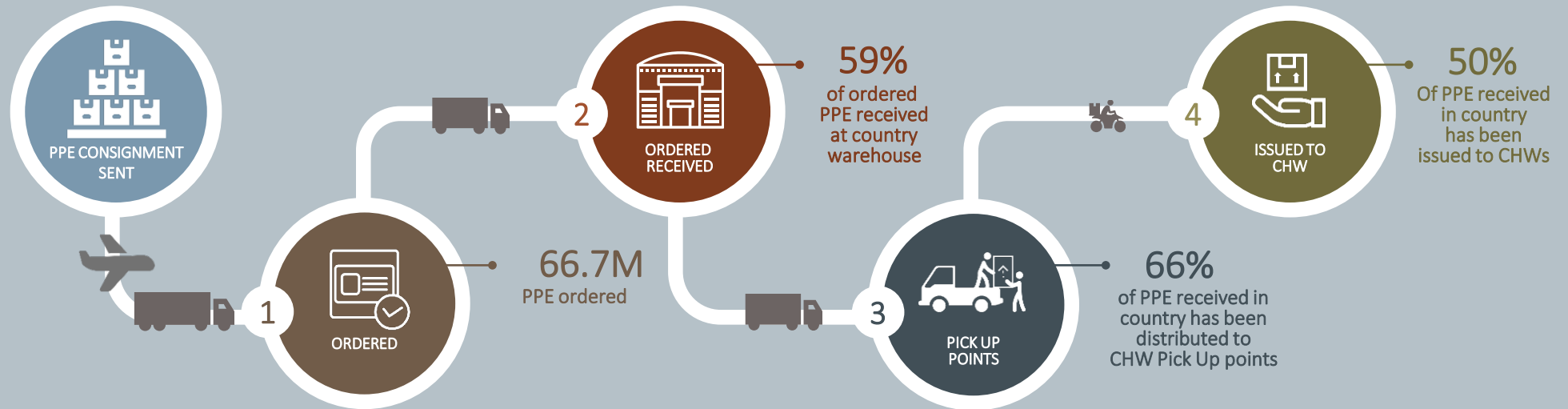


Where are the distribution bottlenecks?

Challenges faced in sourcing gloves due to high demand, pricing hikes and production disruptions

Lead time affected by bureaucracy and inability to establish customs duty waiver in 5 participating countries

In country partner visibility dependent on data received from pick up points and/or CHWs



Volumes of donated PPE affected by availability of funds and increase in freight costs

Limited storage at pick up points resulting in adjustments of volumes transferred from main warehouses. Delays experienced in 3 of the countries as they decided to wait for anticipated delivery of gloves



Status of distribution progress, by country



Updated as of March 12

Country	Order Received	Pickup Point	CHW	Notes
Côte d'Ivoire	40%	100%	100%	All Face Shields and Face masks fully issued to CHWs
DRC	67%	65%	65%	LMD and PPE issues to CHWs progressing well
Lesotho*	100%	100%	40%	LMD to districts and PPE issue to CHWs has started
Liberia	100%	100%	100%	All face shields distributed to CHWs
Malawi	80%	99%	99%	All Face Shields and Face masks fully issued to CHWs
Mali	75%	96%	8%	Delayed due to unrest. LMD started
Mozambique	53%	0%	0%	Face shields and masks received at CMAM W/hse
Rwanda*	100%	100%	100%	All Face Shields and Face masks fully issued to CHWs
Sierra Leone	100%	94%	94%	All Face Shields and Face masks fully issued to CHWs
Togo	86%	100%	100%	LMD started and PPE issues to CHWs in progress
Uganda	69%	58%	58%	LMD started and PPE issues to CHWs in progress
Zimbabwe	86%	73%	72%	Collection by Face Shields & Masks on-going
Total	71%	75%	56%	

*Lesotho and Rwanda orders from Round 2 not included in these results.



Status of distribution progress, by country

Order
Received



% of Order received at
Warehouse

Pickup
Point











% of Product Received
delivered to Pick Up Point

CHW

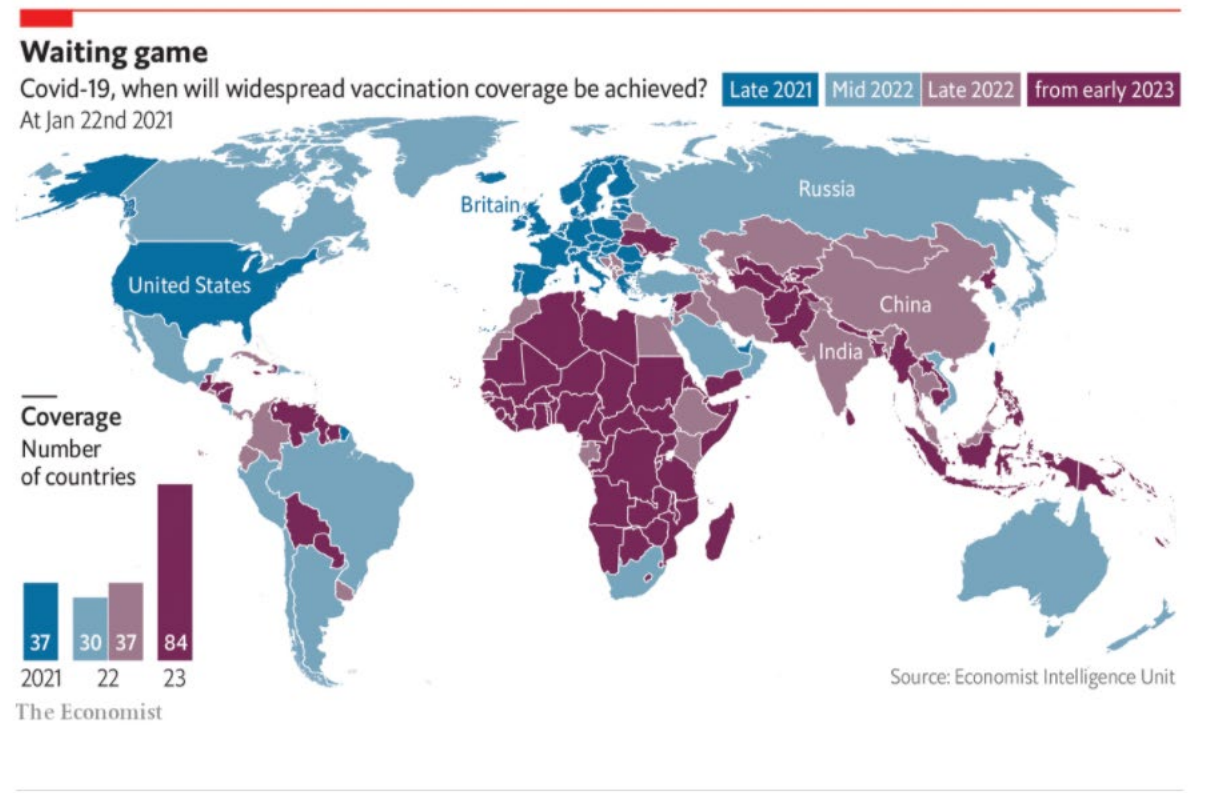
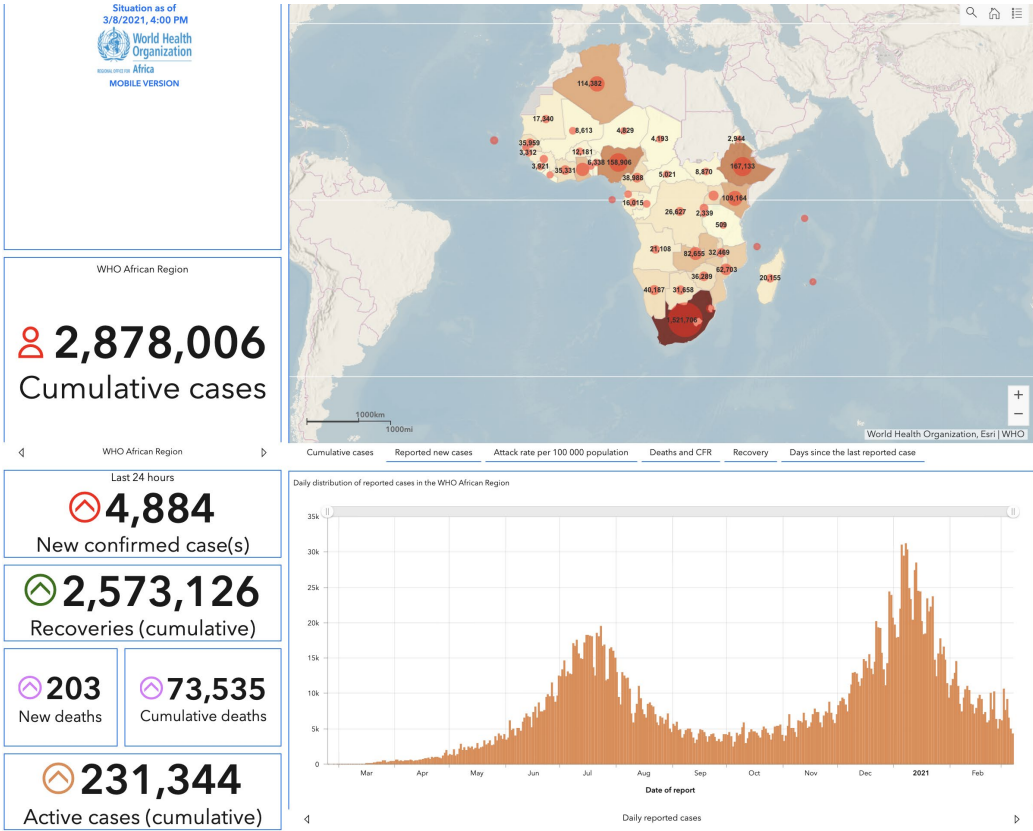


% of Product Received
delivered to CHW

Updated as of March 12

Country	Order Received	Pickup Point	CHW	Notes
 Angola	46%	0%	0%	Customs clearance pending for Masks & Shields
 Ethiopia	100%	0%	0%	Have received all face masks - LMD to start soon
 Kenya	0%			
 Lesotho	96%	100%	40%	LMD to districts and PPE issue to SHWs has started
 Madagascar	0%			
 Nigeria	40%	0%	0%	LMD Scheduled to start soon
 Rwanda	66%	100%	100%	LMD and pick up by CHWs completed
 Zambia	89%	30%	0%	LMD to district W/Hses and pick up points has started
Total	48%	50%	40%	

In 2021, the COVID-19 pandemic in Africa continues and vaccine rollout is ramping up. PPE is still needed for CHWs.



Most key CAF-Africa assumptions still hold, despite a highly dynamic pandemic.

Assumption	2020	Late 2020-early 2021
1. There is an urgent need for PPE for CHWs	<p>YES</p> <ul style="list-style-type: none"> CHWs performed routine services + COVID-19 contact tracing, testing CAF-A's cash on hand meant speedy procurement and supply was possible 	<p>YES, and CHW PPE needs are INCREASING</p> <ul style="list-style-type: none"> Worsening pandemic with SA variant rapidly spreading/ less susceptible to some vaccines MOH-controlled supplies are prioritized for treatment/ quarantine centers Health facilities are overwhelmed with COVID-19 cases CHWs' routine care client load has increased CHWs now provide home-based COVID-19 care CHWs will be involved in COVID-19 vaccine rollout Reusable, cheaper PPE innovations are still being tested
2. CAF-A is a stopgap mechanism for procurement and supply	<p>MAYBE</p> <ul style="list-style-type: none"> #5 PPE supplier globally during severe global PPE shortage 	<p>Clear ongoing gap-filling needs at least through end-2021</p> <ul style="list-style-type: none"> GAVI-funded UNICEF PPE requests from eligible countries decreased/ stopped Jack Ma Foundation has wound down AMSP is new and developing capabilities: WFP are providing TA GF/ WAMBO platform is restricted to registered GF PRs/SRs If govts. don't ask for PPE for CHWs, funders are deprioritizing this
3. Governments aren't including CHWs in PPE procurement plans and budgets	<p>YES</p> <ul style="list-style-type: none"> CAF-A ensured 916K CHWs' needs in 24 countries for 448M units of PPE were recognized UNICEF prioritized ICCM districts GF prioritized malaria/HIV/TB PRs & SRs 	<p>VARIES BY COUNTRY—CAF-A helped improve supply planning, but gaps remain</p> <ul style="list-style-type: none"> Incomplete CHW quantification impedes accurate PPE quantification GF, World Bank, other development banks are key funders Funding & fulfillment of PPE requests varies by country and funder There is an urgent need to include CHWs in COVID-19 vaccine plans
4. Existing supply chains can't handle large PPE volumes	<p>YES</p> <ul style="list-style-type: none"> At national level, MOH/NGOs were key For last mile, NGOs were essential 	<p>YES</p> <ul style="list-style-type: none"> They are also unable to verify PPE is getting to CHWs Last mile delivery resources are limited; heavy reliance on NGOs, UN agencies MOHs are likely to be increasingly stretched as pandemic worsens

There are some differences in perspective and insights among global versus regional and in-country key informants.

However, there is universal agreement that *"CHWs are literally the last in line for PPE."*

Impact of the pandemic

"Routine immunization is going up again, suggesting there is sufficient PPE." (GAVI)

PPE supplies

"India has 50% excess PPE over and above their needs and the export ban has been lifted." (SC expert)

Country quantification

"Thanks to CAF-Africa, we were able to quantify needs." (Uganda, Zambia, Zimbabwe)

Last mile delivery

Issues of concern

Positive insights/ views

"The government is prioritizing treatment and quarantine facilities. As cases surge, CHWs are abandoning their posts." (Malawi)

"PPE is yesterday's news. Everyone's shifted to the vaccine, without really thinking through consumables and vaccine rollout PPE needs." (SC expert)

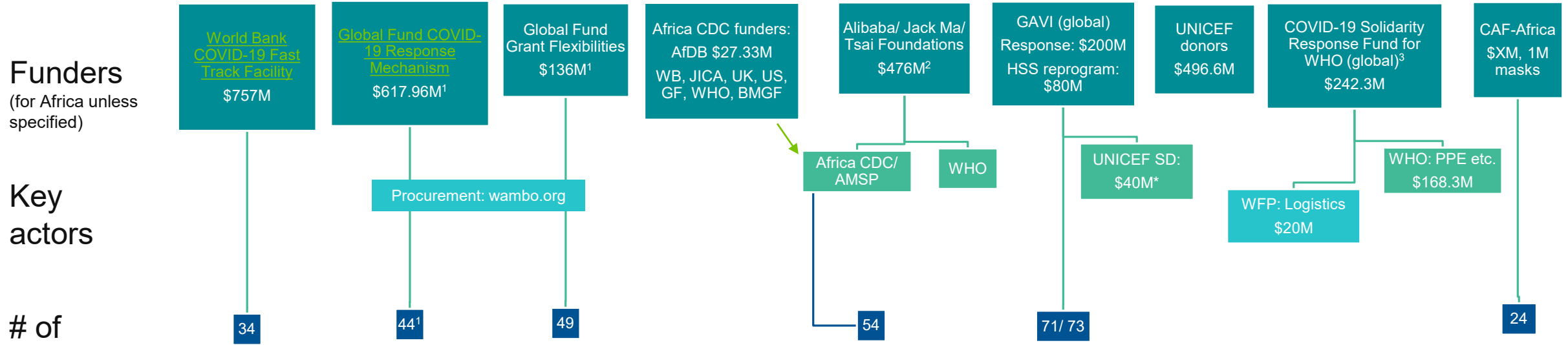
"There is a real need to have reliable CHW estimates. Until this is done, including them in quantification will be a challenge." (BMGF)

"There is less visibility and accountability for MOH-controlled supplies, but even NGOs struggle with verification of delivery." (VillageReach)

"It's unclear with WFP's free service ending how these massive quantities of PPE will continue to reach countries in a timely manner." (SC expert)

African countries have funding options, but grant mechanisms have significant funding shortfalls (ACT Accelerator: \$27.2B, GF: \$313M).

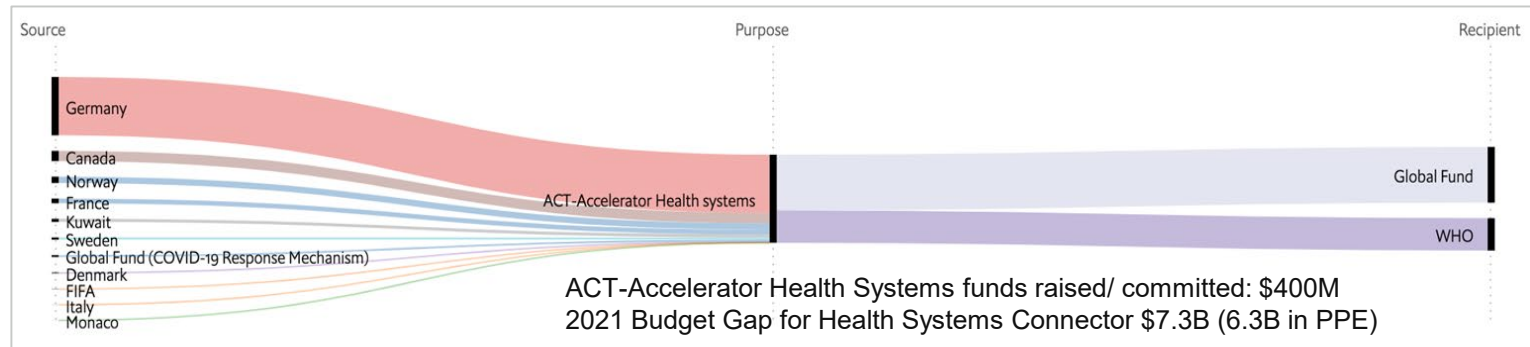
The line of sight from funding sources to actual allocation is unclear and funders defer to country governments to prioritize needs.



Funders
(for Africa unless specified)

Key actors

of countries
(Africa)



*\$10M remains unspent; countries are likely procuring PPE from different funding sources. Sources: (1) https://www.theglobalfund.org/media/10569/covid19_2021-01-28-situation_report_en.pdf (2) <https://www.alizila.com/factsheet-jack-ma-foundation-alibaba-foundations-coronavirus-donations-and-efforts/> (3) <https://covid19responsefund.org/en/>

Global PPE supplies are stabilizing, but even experienced procurers are ill-equipped to deal with pandemic surges*



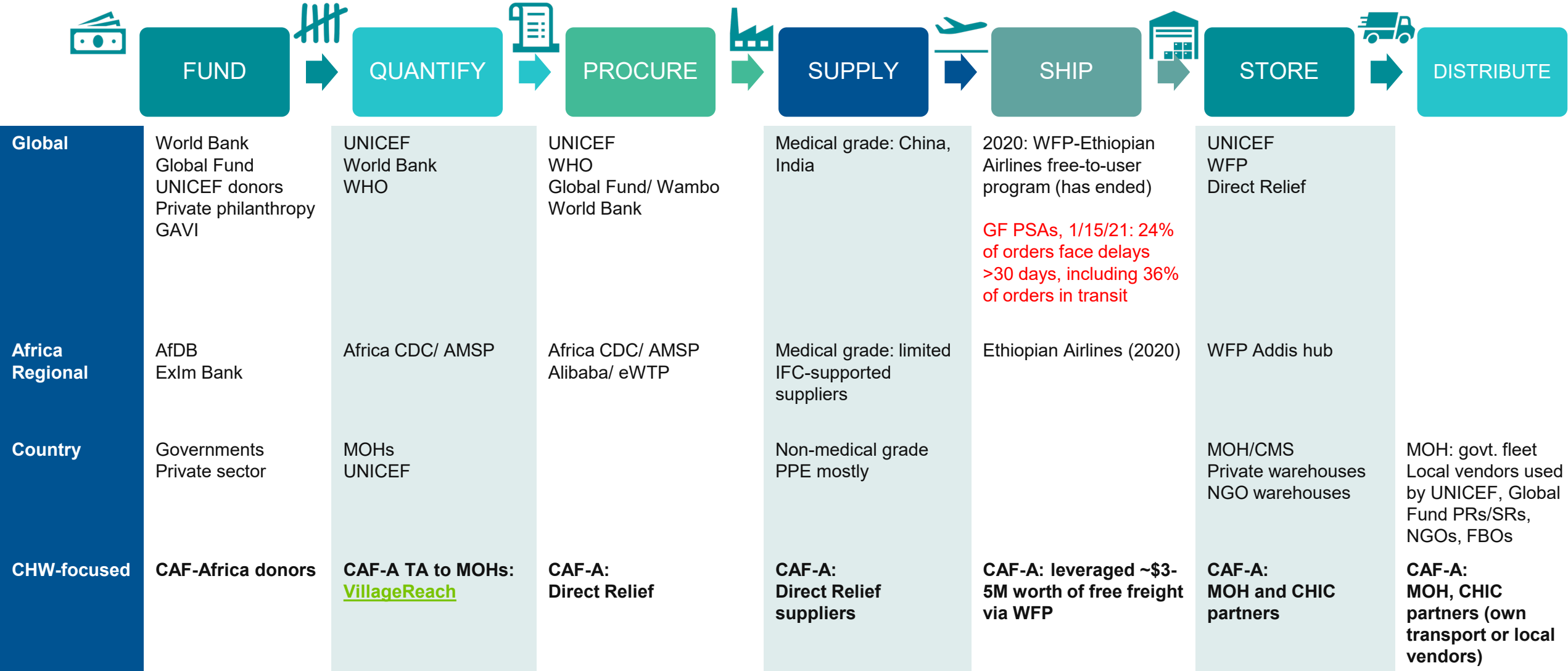
To find month required for order placement, first select products and the date required in country

Indicative lead-time planning guide <i>Note that there may be some variations within the category - please consult the subsequent product level detail for more specific guidance</i>		2020		2021												2022			
		November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April
		Covid-19	COVID Dx (PCR & Rapid Test) - by Air	emergency order	Order Urgently	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
PPE - by Air	emergency order		Late order	Order Urgently	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	
PPE - by Ocean	Late/emergency order				Order Urgently	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21		

*Although many supplies have stabilized, continued glove shortages have prevented the CAF-Africa team from completing glove deliveries.

Country governments are expected to share what support they need.

However, quantifications in many countries have lacked the full workforce (including CHWs) and budgets for last mile distribution support are not sufficient for meeting needs of large volumes of PPE.



Key needs align with CAF-Africa coalition members' and our partners' core competencies.

Consultations identified several urgent needs and opportunities for CHWs and PPE that align with CAF-A partners' core competencies:

- Continued advocacy for sufficient PPE supplies to protect CHWs in their COVID-19 prevention, care and vaccination activities
- Quantification of CHWs including potential for using PPE donations and distribution to build/improve registries of CHWs
- PPE supply planning support to AMSP and MoHs in countries with greatest capacity gaps/ not doing this routinely
- Gap-filling PPE supply including with Africa-based PPE
- Last mile distribution support needs are a weak link and critically important
- Monitoring and verification of where PPE ends up being distributed and used (e.g., facilities vs. CHWs) to inform future projections

Other identified needs from consultations seem less well aligned for the CAF-Africa coalition:

- Increasing Africa-based PPE production, including surgical masks + gloves
- Infection prevention and control training: CDC/ Africa, service delivery NGOs/ FBOs, govts. are addressing this
- Track health worker morbidity and mortality from COVID-19: currently very patchy (GH50/50)

If CAF-Africa decides to continue, 2021 calls for a stronger emphasis on country level support and a stronger backbone:

- More focus on in-country supply chain support, last mile distribution, supply planning at the country level (to support long-term change) and attention to data
 - Help countries leverage other sources of equipment/medicines support that they have access to at country level (Global Fund, Gavi, WB, etc)
 - Direct Relief as a gap filler
- Stronger governance, decision-making, and communication support – requires some core funding and not just pulling on partner goodwill/resources

CAF-Africa partners: contributions

Currently doing for CAF-A
 Doing outside of CAF-A
 Can do more with added resources



Contributions and capabilities	CHAP	CHIC	DR	PAN/ Panorama	VR
Global advocacy for community health systems strengthening and CHW professionalization/ protection <i>CAF-A is the lead coalition advocating for CHW protection and PPE during the pandemic</i>	Currently doing for CAF-A	Currently doing for CAF-A		Currently doing for CAF-A	
Country-level advocacy <i>CHIC members currently advocate for stronger community health systems at country level, but supplies are usually just one of many advocacy points</i>	Support/ galvanize	Can do more with added resources			Can do more with added resources
Update 2020 CHW quantification <i>Huge opportunity to develop CHW registries: necessary for remuneration, rational quantification, etc.</i>	Can do more with added resources	Can do more with added resources			Can do more with added resources
PPE supply planning support to MOHs, NGOs <i>CHIC connects; VR could link country level efforts to regional (e.g., AMSP) and global procurers and suppliers</i>	Can do more with added resources	Can do more with added resources			Can do more with added resources
Last mile distribution support to MOHs and NGOs: CHIC connects partners, VR provides TA/ coordination <i>Countries underestimated 2020 needs. VR and other supply chain partners can help.</i>		Can do more with added resources			Can do more with added resources
Gap filling for PPE supplies: DR was 3 rd largest user of WFP service and could do more <i>DR has strong procurement capabilities and deep relationships with suppliers and logistics providers</i>			Currently doing for CAF-A		Can do more with added resources
Monitoring and verification of PPE (and other commodity) distribution to frontline workers <i>Opportunity to link commodity distribution efforts to CHW quantification</i>		Can do more with added resources			Can do more with added resources
Africa-based PPE production and supply <i>DR has deep manufacturer, logistics relationships</i>			Can do more with added resources	Doing outside of CAF-A	

The pandemic necessitated a short-term focus on PPE for CHWs. CAF-Africa’s collective and individual partner capabilities can be leveraged for COVID-19 therapeutics and vaccine rollout, as well as for longer term community health systems strengthening.

Proposed Next Phase: Continue CAF-Africa for an additional 18 months to increase PPE access, including deeper efforts to integrate community health supply needs into national and regional supply planning efforts

CHALLENGE	OPPORTUNITY	IMPACT
<p>Community health worker needs are not integrated into health system and supply requests</p>	<p>Leverage CAF-Africa's extensive network of multi-disciplinary & multi-country partners committed to CH PPE access</p>	<p>Supplies for community health are integrated into broader supply planning efforts</p>
<ul style="list-style-type: none"> • Stretched domestic & donor resources: competing priorities between routine delivery & COVID-19 response needs • Fragmented PPE supply efforts: at least half a dozen financing and procurement mechanisms at the global level with limited in-country support for consolidation (and CHW prioritization) 	<p>3 objectives for an 18-month PPE access catalyst:</p> <ol style="list-style-type: none"> 1. Mobilize resources & facilitate partnerships to match country PPE needs with donor support (across existing CAF-Africa focus countries) 2. Integrate community health needs with COVID-19 and routine government-led supply planning efforts (deeper effort in 5-7 countries, depending on support and country interest) 3. Fuel advocacy for PPE access for all frontline health workers (Regional) 	<p>Regional:</p> <ul style="list-style-type: none"> • At least three global funders commit to ensuring CHWs are prioritized in supply plans • AMSP, Global Fund and other regional procurement groups have increased data on CHW PPE needs and gaps <p>Country: <i>In current CAF-Africa focus countries</i></p> <ul style="list-style-type: none"> • Guidance for integrated supply planning and increased gov't understanding of options for procurement of CHW-related pandemic needs • Gaps in supply communicated to Direct Relief and other donation programs for pooled donation support <p><i>In at least 5 countries</i></p> <ul style="list-style-type: none"> • CHW supply needs are included in government-led supply plans for COVID-19 response through 2022 (including for vaccine planning and other essential supplies) • CHWs receive increased essential PPE (Masks, gloves, face shields)

APPENDIX

ASSUMPTION

There is a continued and urgent need for PPE for CHWs.

Yes. PPE need continues and is even growing.

PPE shortages are a factor in decreased service utilization and related secondary health impacts

- Learning curve for MOHs to develop guidelines for essential services during COVID-19
- Staff were redeployed to COVID-19 treatment facilities and isolation centers
- Stay-at-home messaging was initially understood as “avoid facilities”; home births, MMR and IMR went up in some settings
- Some CHWs told to stay home because they don’t have PPE; additional burden on strained health facilities⁴
- PPE shortages in turn are affecting community-based services^{5,6,7}
- WHO regions: 90% experienced some disruptions, with greater disruptions in LMICs and LICs
 - Routine immunization services: outreach (70%) and facility-based services (61%)
 - Family planning and contraception (68%), antenatal care (56%)
 - NCD (69%) and cancer (55%)⁸ diagnosis and treatment, treatment of mental health disorders (61%)

CHWs’ COVID-9 response roles are expanding

- Contact tracing, surveillance, home-based care
- Surgical masks: initial estimate was 1/day but with service utilization increasing, CHWs need a minimum of 2/day
- Home visits: WHO recommends glove change after each visit ¹
- Push for increased CHW recruitment^{11,12,13}

CHWs will be essential for COVID-19 vaccine rollout

Attempts to reduce PPE consumption are ongoing.

Efforts are ongoing to increase health service utilization and reduce PPE need for PHC^{8,14,15,16,17,18}

- Telemedicine, including for COVID-19 care^{14, 1}
- Triage, bundle activities and rational PPE use
 - Sterile gowns and gloves for urgent sterile patient procedures
 - Respirators for aerosol-generating procedures and patient care with airborne transmitted disease risks, e.g., TB ¹⁸
 - Bundle activities to minimize frequency of patient contact
 - Designated teams for COVID-19 patient care areas can wear PPE for a full shift
- Re-use of and extending PPE life is not recommended unless there is extreme shortage and should be the last resort^{15, 16}
- Alternative PPE use: WHO guideline in latest Rational PPE use report in the case that these should be considered in procurement process¹⁵

Distance or “no touch” ICCM seemed one way to reduce risk but it is impractical because presumptive treatment is unaffordable at scale

ASSUMPTION

**CAF is a stop-gap
mechanism**

Yes, but it depends how you define “stop-gap” and how CAF’s role evolves.

In 2020, CAF was second only to UNICEF in procuring and distributing PPE

- CAF support to quantify PPE needs for CHWs was critical in many countries; no one else was systematically doing this
- Quantities supplied by CAF were large compared to other sources (e.g., Uganda: covered 80,000 CHWs for 3 months);
- **Cash on hand and existing LTAs were key advantages** for timely procurement despite early chaos

Some organizations have stepped in to bridge the PPE gap, but attention and funding is already pivoting to COVID-19 vaccines

- **WHO** is playing a UN agency + implementer coordination role for PPE
- **UNICEF** prioritized PPE procurement for CHWs to continue ICCM early on (3-7% procurement fee); lead COVAX partner for vaccine rollout
- **WFP** was UNICEF, CAF/ DR, Jack Ma Foundation, AMSP logistics partner (4.5% fee, Ethiopia hub interview pending)
- **Global Fund** incorporated PPE into HSS proposal guidance (interview pending)
- World Bank has done costing of PPE; will partner with WFP
- **IFC** and others are developing local PPE manufacturing capacity; cloth masks, sanitizer and face shields are being locally produced but raw materials for surgical masks and gloves need to be imported (interview pending)

AMSP is viewed by some donors as a key long term sustainability play

- Unclear what AMSP’s current capacity and leverage are to ensure suppliers will honor order quantities, timelines and pricing when cash isn’t offered upfront

And the pandemic didn't end in 2020, so...

Need for external support will likely continue for at least 12-18 months

- LICs will likely be the last to achieve high COVID-19 vaccine coverage
- African LICs have poor PPE planning in general, and for CHWs in particular; some MOHs haven't engaged after expressing strong initial interest

Types of support required

- Infection prevention and control training
- Advocacy to include CHWs in strategy and procurement planning and legitimize the cadre, corrective investments to address exclusion of CHWs [1](#)
- Promote centralized management approach to track orders and consumption [13](#), [14](#)
- Local manufacturing efforts [16](#), [19](#)
 - Technical expertise and support navigating the market landscape, particularly to export products
 - Manufacturers are unclear on acceptable quality standards

ASSUMPTION

**Governments aren't considering
CHWs in PPE procurement plans.**

This is still largely true.

Facility-based healthcare workers are prioritized due to overall lack of resources and, until recently, PPE supplies

- PPE for CHWs is essential for protection and empowers them by reducing stigma and fear³
- Quality PPE is still an issue and CHWs sometimes receive low quality PPE (e.g., Zambia: 1-ply masks in some settings)
- Anecdotal descriptions of PPE supplies earmarked for CHWs being diverted to facilities is a sign of insufficient supply
- **“CHWs are an afterthought, always last in line.”**

Inaccurate CHW quantification is a major impediment to procurement, supply and consumption tracking

- UNICEF has ICCM district numbers, GF has malaria district numbers but there is no accurate national picture
- CHW phones provide an opportunity in some settings, but phone ownership isn't universal
- CAF PPE quantification efforts:
 - Approximately 448 million pieces of PPE required annually for 24 African nations ²
 - CAF partners provided quantification TA to governments
- It's unclear how much of non-CAF PPE supplies went to CHWs in 2020
- **Health workforce quantification is a prerequisite for COVID-19 vaccine rollout**
- CHW quantification efforts:
 - Approx. 916,000 active CHWs in 24 African Countries servicing over 400 million people (Center for Global Development) ²
 - OneMillionCHWs⁹
 - WHO COVID-19 Essential Supplies Forecasting Tool ¹⁰ (excludes many CHW classifications as they do not meet the *International Standards of Classification of Occupations*)

ASSUMPTION

Existing supply chains can't handle the sheer volume of PPE supplies to deliver to the last mile.

This is still true.

Volume of PPE is staggering and required WFP-coordinated “milk runs” by Ethiopian Airlines planes to national capitals

- In the DRC, it took 7 WFP lorries 3 days to move supplies from the airport to a central warehouse
- WFP are now building cold chain capacity in major global hubs in anticipation of vaccine rollout

While public sector often supports distribution national/regional/district warehouse levels, last mile distribution often needs added resources/ partners

- In-country partners under-estimated this need in initial round so CAF has asked them to budget for this in subsequent rounds

However, it’s not always clear what happens to the PPE beyond the most distal supply chain tier

- CAF wasn’t set up to do this; trustworthy partners report supplies are reaching CHWs
- Need for consumption data to inform future quantification efforts
- Need to promote centralized request management to avoid duplication of stock and ensure adherence to essential stock management rules to limit wastage, overstock and stock ruptures

13, 14

CAF-Africa partners: contributions

Currently doing for CAF-A
 Doing outside of CAF-A
 Can do more with added resources



Contributions and capabilities	CHAP	CHIC	DR	PAN/ Panorama	VR
Global advocacy for community health systems strengthening and CHW professionalization/ protection <i>CAF-A is the lead coalition advocating for CHW protection and PPE during the pandemic</i>	Currently doing for CAF-A, Doing outside of CAF-A, Can do more with added resources	Currently doing for CAF-A, Doing outside of CAF-A, Can do more with added resources		Currently doing for CAF-A, Doing outside of CAF-A, Can do more with added resources	
Country-level advocacy <i>CHIC members currently advocate for stronger community health systems at country level, but supplies are usually just one of many advocacy points</i>	Support/ galvanize	Doing outside of CAF-A, Can do more with added resources			Doing outside of CAF-A, Can do more with added resources
Update 2020 CHW quantification <i>Huge opportunity to develop CHW registries: necessary for remuneration, rational quantification, etc.</i>	Currently doing for CAF-A, Can do more with added resources	Currently doing for CAF-A, Doing outside of CAF-A, Can do more with added resources			Currently doing for CAF-A, Can do more with added resources
PPE supply planning support to MOHs, NGOs <i>CHIC connects; VR could link country level efforts to regional (e.g., AMSP) and global procurers and suppliers</i>	Currently doing for CAF-A, Can do more with added resources	Currently doing for CAF-A, Can do more with added resources			Currently doing for CAF-A, Can do more with added resources
Last mile distribution support to MOHs and NGOs: CHIC connects partners, VR provides TA/ coordination <i>Countries underestimated 2020 needs. VR and other supply chain partners can help.</i>		Currently doing for CAF-A, Can do more with added resources			Currently doing for CAF-A, Can do more with added resources
Gap filling for PPE supplies: DR was 3 rd largest user of WFP service and could do more <i>DR has strong procurement capabilities and deep relationships with suppliers and logistics providers</i>			Currently doing for CAF-A, Can do more with added resources		Can do more with added resources
Monitoring and verification of PPE (and other commodity) distribution to frontline workers <i>Opportunity to link commodity distribution efforts to CHW quantification</i>		Currently doing for CAF-A, Can do more with added resources			Currently doing for CAF-A, Can do more with added resources
Africa-based PPE production and supply <i>DR has deep manufacturer, logistics relationships</i>			Can do more with added resources	Doing outside of CAF-A	

The pandemic necessitated a short-term focus on PPE for CHWs. CAF-Africa’s collective and individual partner capabilities can be leveraged for COVID-19 therapeutics and vaccine rollout, as well as for longer term community health systems strengthening.

Deep Dive: Malawi

Community Health PPE Supply: Assumptions and Quantities

Items Description	Unit	Purpose	Formula	PPE Conservation factor (# of days)	No. of PPE/patient served/day	Estimated care events per quarter*	Need (Y/N)	Quantity req. Including 40% Buffer (per quarter)
Disposable surgical masks	single	PPE for Home Isolation	PPE needed per patient x # of patient-days in isolation over 12 weeks/ PPE conservation factor	7	2	630000	Y	252,000
Disposable gloves	pair			1	1	630000	Y	882,000
Apron	single			21	1	630000	N	42,000
Disposable surgical masks	single	PPE for Contact Tracing	PPE needed per patient x # of patient days of contact tracing over 12 weeks / PPE conservation factor	14	1	2100000	N	210,000
N95 respirators	single	PPE for testing (Sample collection)	PPE needed to collect sample per patient x # of tests expected over 12 weeks / PPE conservation factor	10	1	30000	N	4,200
Disposable gowns	single			10	1	30000	N	4,200
Disposable gloves	pair			1	1	30000	N	42,000
Eye Protection (google or faceshield)	single			10	1	30000	N	4,200
Disposable surgical masks	single	PPE for Transport	PPE needed per patient transport x # of transports over 12 weeks / PPE conservation factor	1	1	6000	N	8,400
Disposable gowns	single			1	1	6000	N	8,400
Disposable gloves	pair			1	1	6000	N	8,400
Eye Protection (goggle/ faceshield)	single			10	1	6000	N	840

***Key assumptions:**

21 days isolation per patient; 14 days if no testing is available and symptoms resolve (gloves: could be removed if we assume 20% of patients are weak and need support)
 2% of population will become infected (~30,000 individuals)
 1 CHW covers ~375 persons (based on Liberia ratio of 4000 CHAs serving 1.5M population)
 Contact tracing: 1 suspect has 5 close contacts; each contact requires 14 days of follow up (try remote tracing first; assumes ICCM masks are available and can be reused)
 30,000 est. cases x 5 contacts each x 14 days per contact/ case = 2,100,000
 Ideally, each suspect gets tested; assume capacity will increase (currently 5,000 tests available for every 30,000 est. cases)
 ~20% of cases are severe and require transport to treatment facility
 Doesn't factor in patient and caregiver PPE needs

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