



## Policy Report

**Our Best Shot:** Women Frontline Health Workers in other countries are keeping you safe from COVID-19



## Executive Summary

Fully realizing the social and economic benefits of halting COVID-19 requires investing in a fast and fair global rollout of COVID-19 vaccines. CARE estimates that for every **\$1 a country or donor government invests in vaccine doses, they need to invest \$5.00 in delivering the vaccine.**<sup>i</sup>

Investments in frontline health workers are a critical component in this comprehensive vaccination cost. Of the \$5.00 in delivery costs, **\$2.50 has to go to funding, training, equipping, and supporting health workers—especially women**—who administer vaccines, run education campaigns, connect communities to health services, and build the trust required for patients to get vaccines. For these investments to work, they must **pay, protect and respect women frontline health workers and their rights**—a cost that is largely absent from recent WHO estimates on vaccine rollout costs. No current global conversations or guidance on vaccine costs includes the full cost of community health workers or long-term personnel costs.

Investing in a fast and fair global vaccine distribution will **save twice as many lives** as maximizing vaccine doses for the wealthiest countries in the world.<sup>i</sup> Even better, investing in vaccine equality will speed up economic recoveries in every country in the world. For every \$1 invested in vaccines in less wealthy countries, wealthy countries will see **\$4.80 of economic benefit because economies can fully re-open sooner.**<sup>ii</sup> **Failing to make this investment could cost wealthy economies \$4.5 trillion in economic losses.**<sup>iii</sup>

Current global debates are focused so narrowly on equitable access to vaccine doses that they largely overlook the importance of delivering vaccines—and the key role women frontline health workers play in vaccine delivery. Of 58 global policy statements on vaccines, only 10 refer to the costs of delivery at all—and these are primarily technical advisories from the World Health Organization. No government donors

<sup>i</sup> These are illustrative numbers based on triangulating 3 different possible models. Actual costs could range from \$3-\$6 or higher, depending on local contexts. Any budgeting exercise should include local costing experts for health systems.



are discussing the importance of vaccine delivery systems that are necessary to ending COVID-19. Only one statement—from Norway—refers to the importance of women health workers as part of the solution to ending COVID-19.

As new and dangerous strains of COVID-19 emerge in countries that are struggling to access the vaccine and control the pandemic, every day we wait for fair global vaccination allows for more contagious strains that spread around the world. The more chances the virus has to mutate in non-vaccinated populations, the higher the risk for everyone. **Comprehensive global vaccine delivery plans** that make sure the vaccine gets to people who need it—and that those people are ready to get the vaccine when it arrives—**are the only way to end this threat. No one is safe until everyone is safe.**

Since COVID-19 started, essential workers in hospitals have gotten much well-deserved attention as heroes who have helped control and manage the epidemic, care for the sick, and lose their lives serving others. Those heroes in health centers are only part of the story of how we'll end COVID-19. Less recognized, but no less important, are the 3.5 million semi-formal and informal health workers around the world who serve the patients at the “last mile” of delivery.<sup>iv</sup> At least 70% of these health workers are women - who are risking their lives to get vaccines, services, and supplies to the most underserved and at risks populations in the world.<sup>v</sup>



**“The constant fear of my safety and survival has become a part of me, and I continue anyway. If not me and the many like us reaching out, there are families who will not have one to help them during this crisis. **Nothing can stop me”****

– Karunya Devi, Social Worker and Project Manager in India.

Appallingly, these women are getting little of the protection, recognition, equality, and pay that they deserve. Women health workers contribute \$3 trillion dollars to the global economy every year, but HALF of this work is unpaid and unrecognized.<sup>vi</sup> Where they do get paid, they make 28% less than their male counterparts.<sup>vii</sup> They aren't getting access to the vaccines, either. WHO estimates that currently 30 million high-risk people are not included in any government vaccination plans, and many of them are community health workers.<sup>viii</sup> In COVID-19, trauma and overwork are putting millions of healthcare workers at risk and compromising the care they can give. In the US alone, 76% of nurses are reporting burnout and exhaustion, and there are similar numbers in most countries in the world.<sup>ix</sup> **Investing in these women is one of the best ways to ensure we experience the benefits of COVID-19 vaccines.** Those investments will continue to payoff for years to come in pandemics avoided, faster crisis responses, and economic growth.

**Respecting human rights, equality and leadership for women health workers is the key ingredient to keeping everyone safe from COVID-19.** Women health workers have incredible insights about what is working, what patients are experiencing, and where there are gaps in the system that leaders need to quickly pivot to fill. Currently, they have few ways to share these insights in ways that improve the system. While evidence shows that having women frontline health workers involved in decision-making and shaping solutions improves life expectancy and patient outcomes,<sup>x</sup> only 25% of leaders in the health

care field are women. The lack of women in health care leadership significantly decreases the ability to effectively deliver vaccines and responses to COVID-19.<sup>xi</sup> It also holds back the potential of half the population and reinforces inequalities we should be dismantling.

### Recommendations

We can solve these challenges if global leaders—especially high-income countries and multilateral donor agencies—focus on four key actions:

- **Invest global funding in a fast and fair global vaccine rollout.** High-income countries, donors, development banks, and national governments need to invest in comprehensive vaccine delivery. This investment has to include not just the money invested per dose of vaccine, but also an average of \$5.00 in preparation and delivery for every \$1 in vaccine. COVAX and WHO need to include the full costs of delivering vaccines, including all health workers—formal and informal—as part of their costing models and advocacy asks.
- **Protect, pay, and value (women) frontline health workers.** Out of the \$5.00 in delivery costs, \$2.50 has to go to equipping, paying, training, and supporting frontline health workers (at least 70% of whom are women). That includes ensuring they are first to receive the vaccine when available in their country and provided adequate personal protective equipment. It also includes **ensuring equitable pay, and safe and supportive working conditions** for women health workers on the frontline of COVID-19 response, including childcare, hazard pay, and funds for health-related expenses.
- **Invest in women leaders.** Ensure women, especially women frontline health workers, have meaningful roles and voice in leadership in shaping vaccine roll out, policies and programs at all levels.
- **Start immediately to build national vaccine readiness** and strengthen health systems so they are prepared to pivot quickly to fast and fair vaccine delivery, once doses are available.





With variants of the virus, such as those found in the UK, South Africa, and Brazil, continuing to emerge and spread in new countries, it is painfully clear that the safety of any person depends on the ability to protect everyone. While some countries begin to vaccinate their populations, we are not safe from COVID-19 until everyone is safe. Promoting justice and equality isn't just the right thing to do, it's also the only path through the pandemic.

**We can save twice as many lives if we invest in a fair vaccine distribution than if we only focus on high-income countries.** A study from Northwestern University estimated that 61 percent of global deaths could be averted if the vaccine is distributed to all countries proportional to population, while only 33 percent of deaths would be averted if high-income countries got the vaccines first.<sup>xii</sup> If we do not effectively reach lower income countries, especially vulnerable and marginalized populations within these countries, the long-term impact of COVID-19 will be catastrophic with global health, social and economic implications.

**Inequality risks all lives everywhere.** COVID-19 may not respect borders, and it may put everyone at risk, but its impacts are hitting poor and underrepresented people hardest. In the United States and worldwide, the pandemic is having a disproportionate impact on people who already face unfair obstacles due to race and ethnicity, gender, age, occupation, or other contributing factors.<sup>xiii</sup> Global and national leaders can do better than this. We can act to support equality in ways that will protect everyone.

Stronger variants of the virus will continue to emerge in populations that are not immunized, and social and economic inequalities will only widen. Emerging mutations and variants of COVID-19 that emerge and spread in some countries will affect us all. They could reduce the efficacy of vaccines we do have and make it harder to reopen global economies in the ways that would jump-start a post-pandemic recovery.

**“It was terrifying to think about being a carrier of this deadly virus. I have four kids...It was scary to think that this could infect our kids.”**

– Meagan Cundiff, Paramedic in the United States.



## No one recovers until everyone recovers

We have already seen COVID-19's devastating economic effects on national economies, and the global economy. The global recession sparked by COVID-19 is also reversing the economic progress of several countries in various regions, with the threat of pushing 96 million people into extreme poverty, of which 47 million are women and girls.<sup>xiv</sup> If we don't quickly invest in fair vaccination campaigns, we run the risk of prolonging a pandemic that has most detrimental consequences for the people who can least afford it. The pandemic sets our journey towards equal rights and equality back decades.

Investing in fair global vaccinations will have economic benefits for everyone. For every \$1 they spend on vaccines in less wealthy countries, wealthier countries will get back about US\$ 4.80 because their economies can reopen and grow faster. Even if wealthy countries had to spend \$50 billion to support vaccinations in poor countries, it would still be a good investment in economic growth.<sup>xv</sup> If we fail to invest in a fair vaccine strategy, it could cost wealthy countries \$4.5 trillion dollars, and economies like the US could lose 3.9% of their GDP. <sup>xvi</sup> That risk impairs our ability to build a just and sustainable future.

**“During Ebola, many of us health workers died... My advice [to health workers] is to make sure you take care of yourself, think about your life first, about your family, and protect yourself.”**

– Rosaline, Nurse in Sierra Leone

## Vaccines are useless without delivery systems

The current global debate about vaccine equality is largely ignoring a key ingredient in the solution to COVID-19. No matter how many vaccines are globally available, investments in delivery of the vaccine are the only way to ensure everyone gets vaccinated and to control the pandemic. We must invest in comprehensive vaccination plans in all countries even before vaccine doses are available. Evidence from Africa shows that early investments in public health systems make the impacts of pandemics shorter and less severe.<sup>xvii</sup> Despite this clear evidence from past pandemics, of 58 publicly available vaccination strategies and policy statements from global actors like the WHO that CARE reviewed, only 18% discuss the costs of vaccine delivery, and only one discusses the barriers that women health workers face in delivering vaccines.

CARE estimates that to conduct a comprehensive strategy in this level of global pandemic, **policy makers need to invest \$5.00 dollars in rollout for every \$1 they spend on vaccines themselves.**<sup>xviii</sup> Vaccines only work when patients receive them. That requires functional and equitable health systems that can reach people everywhere. What does that \$5.00 include? To deliver vaccines effectively, for every \$1 of vaccine, governments, donor nations, and multilateral funders need to invest:

- **\$2.50 to supporting health workers**, including training, equipment, and salaries. This estimate includes fair pay and safe working conditions for both full-time health staff and part time workers, as well as surge capacity for vaccinators. Because of the particular crisis that COVID-19 has caused for women in terms of increased unpaid care responsibilities, this number includes **\$0.15 for childcare costs to make it possible for frontline health workers to function effectively.** In addition to providing dignified and just work for health workers, this investment has long term payoffs for human health. Better trained, better paid workers deliver higher quality services and save more lives.
- **\$1.70 to strengthening and maintaining health infrastructure** such as cold chains, vaccine tracking systems, power supplies, and administrative costs.

- **\$0.65 to social mobilization** and education campaigns to increase vaccine acceptance.
- **\$0.15 to keep health workers safe from COVID**, including the increased time it takes to administer vaccine campaigns while enforcing social distancing and higher needs for personal protective equipment.

## Methodology

We reviewed more than 100 published studies about vaccine costs. These studies are highly variable, and different studies include different costs of vaccination. There is no universally agreed standard on what costs to include in vaccination models. In particular, there are no guidelines about what costs to include for health workers of any kind or at any level.<sup>xxix</sup> In this context, providing more information about the comprehensive cost of a fast and fair vaccine rollout is critical to advancing the global conversation. To arrive at the current cost estimate, CARE used WHO's costing figures for a proposed Ebola vaccine strategy in 2016 as the basis for our model, adding other variables to that core model to ensure a more comprehensive picture.<sup>xx</sup> The proposed Ebola vaccination campaign most closely mimics the current context, having to quickly reach large segments of the population that are not included in traditional childhood vaccine systems with a new vaccine people may not be comfortable using. We complemented this model with cost estimates of how much implementing COVID-19 safety measures would increase the cost of a vaccination campaign.<sup>xxi</sup> We also included standard systems costs for running long-term vaccination campaigns and supporting health workers from peer-reviewed published sources.<sup>xxii, xxiii, xxiv</sup>

These figures are illustrative and based on global averages and large datasets rather than exact costs. They are intended to provide high-level guidance for planning vaccine campaigns and to inform current debates around vaccine equality, rather than to be inserted directly into budgeting plans. To plan costs for an actual vaccine campaign, policy makers will need to work closely with health financing experts and frontline health care workers in their own contexts. Specific costs will vary given the country context, the population demographics, and the existing health capacities and systems. The specific numbers may range from \$3-\$6 or even higher invested in rollout for every \$1 invested in vaccines.<sup>xxv</sup>

These numbers differ from the WHO estimate of \$3.70 per person vaccinated<sup>xxvi</sup> in several significant ways. First, CARE's numbers aim to **provide fair pay and safe working conditions for every health worker contributing to the vaccination effort**—a cost that WHO has excluded from their estimates on the grounds that these costs are already covered in existing health systems. We know that at least half of women health workers' contributions to global healthcare are not currently paid, and we must include salaries and protection for these workers in global cost guidelines. WHO also estimates based on only formal health workers; CARE is advocating to **include fair pay to ALL community health workers of all kinds—formal and informal**—for their contributions to ending COVID-19. Finally, CARE includes contributions to **support women health workers roles as unpaid caregivers** to ensure women can both take care of their families and provide the essential services they support as health workers of all kinds. This explicit focus on overcoming women's additional burdens is necessary to successfully ending COVID-19.

## Only (women) frontline health workers make vaccinations possible

It is no surprise that the costs of paying, training, equipping, and supporting health workers are the biggest percentage of this cost estimate. **We need to invest \$2.50 in health workers for every \$1 we invest in vaccines themselves.** Health workers are the lynchpin in delivering fast and fair vaccinations all over the world. Despite this fact, frontline health workers (70% of whom are women) are chronically underpaid, undervalued, and often work in unsafe conditions without resources and support. Improving investments in these women will reinforce the ways that women frontline healthworkers make vaccines possible.

- **Build trust.** A global study shows that at least 28.5% of people are heistant to take vaccines, and in some countries this numbers is as high as 60%.<sup>xxvii, xxviii</sup> Without vaccine acceptance, we'll never get enough people vaccinated to protect everyone. **Investing in women health workers is the best way to overcome vaccine hesitancy.** People's trust in health care workers is one of the most important factors in improving vaccine uptake, more than the opinions family, friends or other non-medical sources.<sup>xxix</sup>
- **Educate patients.** Growing public mistrust could undermine the global effort on the development and coordination of distribution of COVID-19 vaccines. Fixing that requires investing in education campaigns to convince people that they should get the vaccine and help them figure out how to get one. It also includes promoting equality in vaccinations—and making sure that women and girls can access shots and other health services. **At least 12% of total costs are educating people about the vaccine.**<sup>xxx</sup> Women frontline health workers are the ones who deliver most of that education.
- **Protect rights.** Community health workers help communities hold service providers accountable and raise concerns that improve the quality, effectiveness, and uptake of health services. They protect patient's rights, and help administrators find better ways to serve those patients.<sup>xxxi</sup>



**Meet Gabriela,**  
Surgeon and  
humanitarian  
worker in Honduras

Women health workers like Gabriela are going above and beyond to provide health care and support communities during the pandemic. Gabriela is a surgeon in Honduras and has been supporting communities in the Lempa region of Honduras, helping to deliver food, cash transfers, and providing capacity building for women leaders on COVID-19 response and eradication of gender-based violence in their communities.

Gabriela and colleagues work with communities to also share messages about COVID-19 prevention and mitigation. Gabriela shares **“one of the lessons learned in one of the communities in the west part of Honduras is that many people do not have access to a disposable mask and cannot afford to buy a mask. Many didn't see the use of it and decided to not make getting a mask a priority. We came up with alternatives and found reusable mask in their traditional Lenca clothing. They used those with pride. That way, we supported small businesses of women sewing these masks and strengthened preventive measures in the communities. All the masks have a filter, and we advise to wear these masks and combine their use with social distancing and washing hands.”**

Supporting women's leadership in communities is a source of pride for Gabriela. **“It is such a reward to see these women so confident in themselves. Throughout all this process, from families receiving food or cash transfers women were the organizers, the leaders because they know the context. It is a key step to lead in the community in times like these.”**



- **Help everyone access vaccines and services.** Women frontline health workers create solutions to the many barriers women face accessing health care—like needing permission from their husbands or not being able to visit male doctors.<sup>xxxii, xxxiii</sup> These challenges have only gotten worse in COVID-19, where women are twice as likely to have lost access to health services as men are.<sup>xxxiv</sup> Because women are primarily responsible for caregiving and their children’s immunization—and likely vaccinations for elderly family members in the COVID-19 context—these restrictions will dramatically reduce vaccine uptake. Women health workers have a unique ability to reach women in communities, understand the barriers they are facing, and plan solutions to overcome them.
- **Deliver vaccines and services.** Women frontline health workers in Bihar, India got involved in planning vaccine campaigns and working with communities to improve uptake. Within 10 years, they’d improved vaccination rates from 12% to 84%.<sup>xxxv</sup> In Benin, women health workers have been able to combine vaccination and family planning services to build trust, dispel myths and misconceptions, and improve uptake.

## MODELS TO COPY

Teams of health workers in Ghana have translated health messages into local language voice recordings so that illiterate people can hear messages in the language they understand.

In Afghanistan, health workers are using mobile phones and apps for awareness raising, reaching more than 60,000 people with text messages and 2,000 women with mobile phone voice messages.<sup>1</sup>



Vaccinating just the 20% of the population that’s most at risk by the end of 2021 is the only way we know of to contain the COVID-19 pandemic. This is an urgent priority that **will require 1.1 million full-time health workers, 770,000 of whom will likely be women.**<sup>xxxvi</sup> Achieving herd immunity- which will require vaccinating the 80-95% of people globally, that would require 4.4 -5.2 million full time health workers JUST focusing on vaccines and not delivering any other health services.<sup>xxxvii</sup> That’s in a world that already had 18 million *fewer* health care workers than we needed to serve the people who need care.<sup>xxxviii</sup>

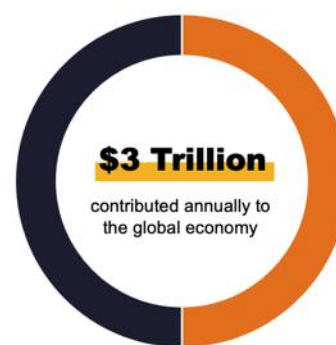
## MODELS TO COPY

Countries like **Colombia** are providing psychosocial counseling to health workers via hotlines and other mobile applications to help them cope with the stress of COVID-19 and their increased workloads. **Uganda** has also rolled out psychological first aid to support frontline health workers and community members, and provides case management officers to follow up with people who need extra help.

## Gender equality is non-negotiable

This report consistently refers to **women** frontline health workers. That's because about 70% of frontline health workers around the world are women. Most of the people who work directly and consistently with patients are women; for example, 90% of nurses are women.<sup>xxxix</sup> Gender inequality keeps them underpaid, under supported, and unable to influence key decisions. That **inequality is literally killing people—health workers and patients alike.**

**Women aren't getting paid:** These women are providing some of the most critical services and taking some of the biggest risks in COVID-19—and in all health situations—at a fraction of the pay and recognition they deserve. Women in the health workforce contribute US\$ 3 trillion annually to the global economy, but **HALF of this is unpaid work.**<sup>xi</sup> When women health workers are paid, they are making 28% less than their male counterparts.<sup>xi</sup> In sub-Saharan Africa alone, one million community health workers provide services to 400,000 million people, and **86% of them are not paid at all.** These women deserve equality and recognition for the critical roles they play. **They deserve equal protection and equal pay.**



■ Unpaid Work ■ Paid Work



Women healthcare workers are paid **28%** less than their male counterparts

**“People always tell me, 'but we have a lot of female nurses.' Yes, but they're nurses. They're not the ones that are doing procurements, not the ones making the decisions on what to procure, they're not the ones making decisions on who to hire. So for me, you need to have women at every level but they also need to be empowered to be able to do their jobs, they need to be respected, their views and opinions, but also you need to give them resources.”**

–Tania Fraser, Sierra Leone's National COVID Emergency Response

**Women health workers are left out of decision-making roles:** Women make up over 70% of health workforce but hold only 25% of leadership positions.<sup>xliii</sup> While women health workers working within communities have the most unique insight and knowledge related to the communities where they work, they are unable to use this experience and information to influence decisions and policy changes. Getting nurses involved in shaping health care decisions, improves the quality of care and patients' life expectancy.<sup>xliiii</sup> WHO says that the lack of women in health care leadership significantly decreases the ability to scale health coverage—a skill we desperately need for COVID-19 vaccination campaigns that must scale to large numbers of people who are not covered under traditional vaccine rollout plans.<sup>xliiv</sup> Despite a clear need for a gender lens in the COVID-19 crisis, the WHO's framework for governance of outbreaks of infectious disease do not require a gender specialist to be involved in decision-making task forces.<sup>xliv</sup>

**Women are dying from COVID-19.** Because of their patient facing jobs and lack of decision-making power at work, and as caregivers in their homes and communities, women health workers have an increased risk of exposure to the virus. The pandemic has increased working hours for many women health workers without adequate personal protective equipment and supplies. 67% of health workers who get infected with COVID-19 are women.<sup>xlvi</sup> Women are working more directly with patients and make up a higher percent of the health workforce than men. The International Council of Nurses estimates more than 20,000 nurses had died of COVID-19 by October.<sup>xlvii</sup> If those numbers follow patterns for nurses, more than 18,000 of those deaths are women. Many women health workers are living with fear of contracting the virus but continuing to provide life-saving services and information to the communities they serve.

**“The Corona virus has affected us a lot because we are working in fear, we do not have equipment we need to protect ourselves as health workers.”**

– Hana Chunga, Health Worker in Malawi.

**Women health workers have to work twice as hard—at work and at home:** Women health workers are facing psychological strain because they are having to do their jobs and fulfill their household caregiving roles. 80% of National Nursing Associations are getting reports of exhaustion, burnout, and mental health issues from their members.<sup>xlviii</sup> Especially with COVID-19 quarantines and movement restrictions, many women health workers are faced with incredibly challenging situations balancing livelihood needs and the needs of those they care for, including their children, family members and members of their community. These women have often seen their existing childcare arrangements collapse because of movement restrictions, health risks, and the fear that they may bring COVID-19 home to other family members. Those impacts and unpaid care burdens are dramatically higher for women than they are for men.<sup>xlix</sup> That’s why we’re proposing \$0.15 for every \$1 spent on vaccines should go to supporting women’s care burdens.



## Meet Joysna

### Skilled Health Entrepreneur from Sunamganj, Bangladesh

In Bangladesh, Skilled Health Entrepreneurs (SHEs) are women community health workers that receive clinical and business training to provide maternal and child health services at affordable costs. When many health services were disrupted in Bangladesh due to COVID-19, SHEs adapted their work to promote risk communication and handwashing, all while continuing to provide their life-saving maternal and child health work. Joysna, one

of the SHEs working in Sunamganj, Bangladesh share, **“During serving the pregnant women and other clients in the outreach, a sense of fear, anxiety came to my mind as I was aware of the consequences of COVID-19. However, my work nature and role for the community encouraged me to move and continue my work.”**

As COVID-19 deaths began to increase in nearby villages, many SHEs like Joysna received resistance from family and community members that it was not safe for them to attend delivery call and provide services. But Joysna’s call to serve led her to continue. **“I know there is a risk, but I take all the personal safety measures like mask, hand gloves, sanitizer, and apron, said Joysna. Risk of contamination of COVID-19, unavailability of transport, non-cooperation from community didn’t stop me to serve the humanity.”**

Health workers like Joysna are the backbone of their communities and in Sunamganj in particular, they only access to affordable health services. Ensuring health workers like Joysna are protected and provided safe working conditions will be critical to having their continued response in the pandemic.



**Respecting these women’s rights and ensuring fair pay is critically important to successfully delivering COVID-19 vaccines.** If we do not support women health care workers, we will lose them—to death, to sheer exhaustion, and to the terrible choices they are facing. In India, nearly 600,000 ASHAs (community health workers) went on strike in August 2020 demanding better pay and recognition because of strains around COVID-19.<sup>1</sup> Providing fair pay, decent working conditions—including childcare options, adequate supervision, and recognition of the work they do, access to protective equipment, access to vaccinations as essential workers are all ways to ensure that women health workers can stay engaged and protecting people against COVID-19 and other pandemics for the long term. As women health workers continue to be overworked and overwhelmed, patient care suffers and the end of COVID-19 stays out of sight.



**“As a health professional, I feel very limited in what I can do, especially in educational activities. The relationship with patients is not the same with distancing, and telework (visits) are very exhausting”**

– Mirian Mejia, Nurse in Colombia.



## Meet Justina

### Nurse and ambulance worker in Sierra Leone

Public health outbreaks are not new to Justina, a nurse and ambulance worker from Sierra Leone. She lived through the Ebola outbreak and recalls the challenges and lessons learned that are now being applied during COVID-19. **“Some of the key lessons learnt during Ebola which we are replicating now in this pandemic is that of compliance.**

**During the Ebola outbreak most of the communities were not observing infection prevention and control protocols except when by-laws were instituted, and they lead to massive community transmission; but what we are seeing now is much encouraging regarding infection prevention compliance.”**

Justina's role as a nurse and ambulance worker is focused on providing emergency medical support and shares that mothers with labor complications or high-risk pregnancies are often their most common patients. The work Justina and others do is critical and even more important during COVID-19 where some mobility restrictions have made access to health services all the more difficult.

As a frontline worker, Justina has seen firsthand the consequences of emergency situations and demonstrates the importance of communities to listen to health workers. She calls on fellow health workers to take caution themselves and ensure they are protected when in the line of duty. **“I am also pleading to us, the health workers, to kindly be very vigilant in our work and make sure we don't underestimate any patient we come in contact with. And let us all intensify PPE usage, as we are the front-line workers. Most of us know what is happening to our colleagues in other districts, many of them have lost their lives already in the line of duty.”**

## Investments now will pay off for years to come

The World Health Organization estimates that investments in health employment can result in 4% growth in gross domestic product,<sup>li</sup> besides the obvious benefits to curbing COVID-19. With investment in equitable vaccines, major economies could receive economic benefits of at least USD \$466 billion by 2025.<sup>lii</sup>

Benefits will be more than financial. These investments will also help prevent and react to future disease outbreaks. Countries in West Africa that responded to the worst Ebola outbreak in 2014-2016 had built and trained the network of community health workers that allowed them to immediately launch education programs, quarantines, and contact tracing needed to prevent the spread of COVID-19.<sup>liii</sup> They have had lower COVID-19 infection and death rates.<sup>liv</sup>



Rwanda used lessons from Ebola to roll out sophisticated and widespread testing, education, and quarantine plans, and is hoping to use their health worker networks to quickly rollout vaccines.<sup>lv</sup> Ebola response taught countries lessons they are already applying to COVID-19: **get trusted leaders to share quality information**, invest in **training health staff and volunteers**, and **think about staff motivation as well as their skills**. Investing in safe, fair, and dignified working conditions for healthcare workers who can influence decisions and protect their own rights made it easier and faster to fight COVID-19, and will continue to pay off for the places that have already done it.

Even in the context of COVID-19, investing in strong and sustainable vaccination systems will benefit the whole world. As more COVID variants emerge, investments in long-term vaccine delivery systems and the workers who support them will make it more possible to stay ahead of the virus, and deliver new vaccines as they become necessary and available.

## Current investments and vaccine strategies must scale dramatically

Global investments in vaccine rollout and leading policy statements that shape the global vaccine dialogue are largely overlooking the critical issue of how patients receive vaccines and who administers them. The recent ACT-Accelerator [Urgent Priorities & Financing Requirements](#) shows that while global commitments to vaccines themselves are at \$8.5 billion dollars out of a required \$11.1 billion, there have only been \$565 million committed to health systems strengthening required to deliver the vaccines. 73% of the money that has been allocated by high-income governments towards systems strengthening is coming from Germany.<sup>lvi, lvii</sup>

These **challenges are already happening in vaccine delivery**. Some governments in Africa do not have fully-fledged delivery plans for doses of COVID-19 vaccines they have already received. Others have found that they cannot use their existing systems to deliver vaccines in the way they had planned

because of the speed needed to deliver vaccines before their expiration dates in June. This requires investing in surge capacity and cannot depend on existing health systems to deliver quickly enough.<sup>lviii</sup> **Failure to invest in vaccine delivery, including full support to ALL health workers will result in wasting doses of vaccine that nations have struggled to produce and procure.**

Two promising commitments can help fill this gap if the donors direct them towards reinforcing system rollout and supporting women frontline health workers. GAVI has committed \$150 million to support country vaccine delivery plans and health systems.<sup>lix</sup> Additionally, the World Bank has committed \$12 billion to supporting countries to purchase and distribute vaccines.<sup>lx</sup> If directed appropriately, this can help fill the funding gap to guarantee fast and fair vaccine delivery.

Other donors and leaders can do more to influence funding so it goes to the most effective solutions and ensure vaccines reach patients fast enough to control COVID-19. Of the 58 public statements from governments and global leaders—such as Africa CDC, WHO, the Pan-American Health Organization, the CDC, the G7 and key donor governments—that CARE reviewed, only one—from Norway—even mention the gender barriers women health care workers face. Fewer than 20% of these statements refer to the costs of vaccine delivery at all. These are critical gaps in the current global debate.

While 72% of reports mention health workers and their critical role in vaccinations, only 17% of reports talk about women health workers, and ZERO policy statements provide sex disaggregated data. None of the current policies and statements guiding global debate at the decision-making level examine the additional risks women health workers face or the additional burdens they are bearing because of inequality. This lack of attention to women workers at the highest policy levels reinforces the inequality that is killing women frontline health workers and all patients. It also makes it unlikely that we will roll out solutions that overcome the challenges holding back effective vaccine distribution. It also leaves us with a shaky foundation for a just and equal future that can bounce back from crisis.

## Policies are overlooking delivery costs and women health worker’s rights

Total documents reviewed	Policies that discuss costs of delivery and rollout plans	Policies that mention health workers at all	Policies that focus on workers’ rights and wellbeing	Policies that present sex-disaggregated data	Policies that consider gender inequality
58	10	42	12	0	1
	17%	72%	21%	0%	2%

HIC’s have started to act- but not fast enough. A number of HIC countries have secured sufficient COVID-19 vaccine doses to begin reallocating a portion of those doses to low- and lower-middle-income countries (LICs and LMICs). In fact, few HICs, including Norway,<sup>lxi</sup> Canada, the EU,<sup>lxii</sup> the United Kingdom, and the US<sup>lxiii</sup>, have already announced that they will share vaccine doses with other countries through COVAX- but as of February 2021, there was no clear timeline for delivering on these promises.<sup>lxiv</sup>



## Recommendations

We know that the COVID-19 vaccine is our best pathway to end this pandemic. Focusing on **delivering COVID-19 vaccines, and supporting women health workers who are crucial to any delivery plan**, is our best shot of ensuring fast and fair delivery of the vaccine, and control of the COVID-19 pandemic. Investing in these women health workers now is a smart investment in our health systems—which must be strong and resilient to combat future threats. Current global debates largely overlook the importance of delivering vaccines, and the critical investments in the systems and people that make that delivery possible. These investments are long overdue, and the current outcry over global vaccine equity is missing this necessary ingredient in success.

We will only exacerbate inequities in health (with repercussions in other areas) if we do not use this opportunity to prioritize equitable distribution of the vaccine and work with our women frontline health workers to do it. To this end, CARE proposes the following recommendations to all decision-makers who are working on COVID-19 issues:

**Invest global funding in a fast and fair global vaccine rollout.** This investment has to include not just the money invested per dose of vaccine, but also \$5.00 in preparation and delivery for every \$1 in vaccine.

- High-income countries, bi-lateral donors, and all contributors to COVAX must consider comprehensive vaccine delivery costs as part of the full cost of COVID-19 vaccinations.
- Development banks who are supporting national governments with the cost of vaccinations must consider comprehensive rollout costs. Any vaccine assistance from development banks must come as either grants or interest-free loans.
- WHO must add the costs of ALL health workers, formal and informal, into their costing models for vaccine delivery.
- COVAX should expand their costing models and advocacy efforts to include comprehensive costs of vaccine delivery, in addition to the focus on vaccines and some support to expanding cold chains and infrastructure.

In order to gain control of the COVID-19 pandemic, high-income countries must accelerate the control of the pandemic by helping **all countries vaccinate at least 20% of their populations in 2021**, starting with health care workers and the most vulnerable.

**Focus on (women) frontline health workers.** Out of the \$5.00 in delivery costs, \$2.50 must go to equipping, paying, training, and supporting frontline health workers (70-90% of whom are women).

- Ensure (women) frontline health workers are first to receive the vaccine when available in their country and provided adequate personal protective equipment.
- Start training early. \$0.40 of support to frontline health workers should go to training them in how to support COVID-19 vaccination campaigns. This training does not need to wait until doses of vaccine are available.
- The World Bank and WHO must expand their definitions and databases of health workers to include community health workers, community-based health volunteers, and other informal health workers who are currently unrecognized, untracked, and unpaid.

**Ensure equitable pay, and safe and supportive working conditions** for women health workers on the frontline of COVID-19 response.

- Allocating at least \$0.15 for every \$1 invested in vaccines to personal protective equipment and measures to ensure social distancing during vaccine campaigns.
- Provide tangible support to women health workers in childcare and elder care to help relieve the unpaid care burdens they face.

**Elevate women leaders.** Ensure women frontline health workers have meaningful roles in shaping vaccine roll out, policies and programs at all levels.

- Set aside at least 30% of seats on COVID-19 vaccine planning commissions for women.
- Allocate at least 15% of seats on vaccine planning committees at all levels for frontline health care workers.
- Create mechanisms for frontline health workers to send feedback and suggestions to national decision-makers about COVID-19 vaccinations.

**Invest now to build national vaccine readiness** and frontload health systems so they are prepared to pivot quickly distributing vaccines, once doses are available.

- Ensure clear protocols and inclusive accountability systems for transparent governance of vaccine-related resources and programs, to ensure fair and efficient delivery of vaccine based on needs.
- Invest at least \$0.65 of every \$1 spent on vaccines to start now on COVID-19 education and vaccine acceptance campaigns.
- Build tracking systems to ensure that vaccine delivery is reaching the most at-risk people in equitable ways.
- WHO should require that National Deployment and Vaccination Plans (NDVP) for COVID-19 planning include attention to and budget for health workers. They should require revisions to those plans if the NDVP does not include attention to health workers.





**For more information, visit: [care.org/ourbestshot](https://care.org/ourbestshot)**

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- <sup>i</sup> Arntsen, E. (2020, September 14). If rich countries MONOPOLIZE COVID-19 vaccines, it could cause twice as many deaths as distributing them equally. Retrieved March 05, 2021, from <https://news.northeastern.edu/2020/09/14/if-rich-countries-monopolize-covid-19-vaccines-it-could-cause-twice-as-many-deaths-as-distributing-them-equally/>
- <sup>ii</sup> Equal, rapid access To COVID-19 Vaccines won't just save lives; it will save money. (n.d.). Retrieved November, 2020, from <https://www.gavi.org/vaccineswork/equal-rapid-access-covid-19-vaccines-wont-just-save-lives-it-will-save-money>
- <sup>iii</sup> World bank APPROVES \$12 billion FOR COVID-19 Vaccines. (2020, October 13). Retrieved from <https://www.worldbank.org/en/news/press-release/2020/10/13/world-bank-approves-12-billion-for-covid-19-vaccines>
- <sup>iiii</sup> Study shows Vaccine nationalism could cost rich COUNTRIES us\$4.5 trillion. (2021, January 25). Retrieved from <https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion/>
- <sup>v</sup> Nepomnyashchiy, L. (2020, June 15). Protecting community HEALTH Workers: PPE needs and recommendations for policy action. Retrieved from <https://www.cgdev.org/publication/protecting-community-health-workers-ppe-needs-and-recommendations-policy-action>
- <sup>vi</sup> Delivered by women, led by men: A gender and equity analysis of the global health and social workforce. Geneva: World Health Organization; 2019 (Human Resources for Health Observer Series No. 24). Licence: CC BY-NC-SA 3.0 IGO.
- <sup>vii</sup> Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce. Human Resources for Health Observer - Issue No. 24 (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>
- <sup>viii</sup> Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce. Human Resources for Health Observer - Issue No. 24 (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>
- <sup>ix</sup> COVAX FACILITY OPERATIONALISATION AND VACCINE PROGRAMME [PDF]. (2020, December 15). GAVI The Vaccine Alliance.
- <sup>x</sup> INTERNATIONAL COUNCIL OF NURSES COVID-19 UPDATE [PDF]. (2021, January 13). International Council of Nurses. \* "Triple Impact – how developing nursing will improve health, promote gender equality and support economic growth." 17 October 2016 <https://www.who.int/hrh/com-heeg/triple-impact-appg/en/>
- <sup>xi</sup> Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce Human Resources for Health Observer - Issue No. 24 (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>
- <sup>xii</sup> Arntsen, E. (2020, September 14). If rich countries MONOPOLIZE COVID-19 vaccines, it could cause twice as many deaths as distributing them equally. Retrieved March 05, 2021, from <https://news.northeastern.edu/2020/09/14/if-rich-countries-monopolize-covid-19-vaccines-it-could-cause-twice-as-many-deaths-as-distributing-them-equally/>
- <sup>xiii</sup> A Framework for Equitable Allocation of Vaccine for the Novel Coronavirus. (2020). Retrieved from <https://www.nationalacademies.org/our-work/a-framework-for-equitable-allocation-of-vaccine-for-the-novel-coronavirus#sectionPublications>
- <sup>xiv</sup> COVID-19 and its economic toll on women: The story behind the numbers. (2020, September 16). Retrieved from [https://www.unwomen.org/en/news/stories/2020/9/feature-ovid-19-economic-impacts-on-women?gclid=Cj0KCQiAgomBBhDXARIsAFNyUqP-lbwEYfnf0fcleonKCCnEorzHybH-ZOiaU61\\_Gopk8fsg1e3uI0MaAsvbEALw\\_wcB](https://www.unwomen.org/en/news/stories/2020/9/feature-ovid-19-economic-impacts-on-women?gclid=Cj0KCQiAgomBBhDXARIsAFNyUqP-lbwEYfnf0fcleonKCCnEorzHybH-ZOiaU61_Gopk8fsg1e3uI0MaAsvbEALw_wcB)
- <sup>xv</sup> Hafner, M., Yerushalmi, E., Fays, C., Dufresne, E., & Stolk, C. (2020). *COVID-19 and the cost of vaccine nationalism* [PDF]. Rand Corporation.
- <sup>xvi</sup> Study shows Vaccine nationalism could cost rich COUNTRIES us\$4.5 trillion. (2021, January 25). Retrieved from <https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion/>
- <sup>xvii</sup> Africa Renewal. (2020, April 3). WHO: How the lessons from Ebola are helping Africa's COVID-19 response. Retrieved from <https://www.un.org/africarenewal/magazine/who-how-lessons-ebola-are-helping-africa%E2%80%99s-covid-19-response>
- <sup>xviii</sup> Janoch, E. (2021, February). *Vaccine Rollout Costing Methodology* [Docx]. CARE.
- <sup>xix</sup> Vaughan, K., Ozaltin, A., Moji, F., Griffiths, U., Mallow, M., & Brenzel, L. (2020, July 18). "Reporting gaps in immunization costing studies: Recommendations for improving the practice." <https://thinkwell.global/wp-content/uploads/2020/07/ICAN-publication-in-Vaccine-X-July-2020.pdf>
- <sup>xx</sup> World Health Organization. "Global Ebola Vaccine Implementation Team (GEVIT): Practical guidance on the use of Ebola vaccine in an outbreak response." Draft Guidance, May 2016. Appendix K accessed online: [https://www.who.int/csr/resources/publications/ebola/GEVIT\\_guidance\\_AppendixK.pdf?ua=1](https://www.who.int/csr/resources/publications/ebola/GEVIT_guidance_AppendixK.pdf?ua=1).
- <sup>xxi</sup> Banks, Christina & Boonstoppel, Laura. "Immunization campaigns during the COVID-19 pandemic: A rapid analysis of the additional operational cost." Accessed online: <https://thinkwell.global/wp-content/uploads/2020/05/COVID-19-impact-on-campaigns-9-June-2020.pdf>
- <sup>xxii</sup> Wolfson, et al. "Estimating the costs of achieving the WHO–UNICEF Global Immunization Vision and Strategy, 2006–2015" *Bulletin of the World Health Organization* 2008; 86:27–39. Accessed online. <https://www.who.int/bulletin/volumes/86/1/07-045096.pdf?ua=1>
- <sup>xxiii</sup> Portnoy, Allison et al. "Producing Standardized Country-Level Immunization Delivery Unit Cost Estimates" *PharmacoEconomics* volume 38, pages995–1005(2020) Accessed online: <https://link.springer.com/article/10.1007/s40273-020-00930-6>
- <sup>xxiv</sup> OECD. "Is Childcare Affordable?" *Policy Brief on Employment, Labor, and Social Affairs*. June 2020. Accessed online: <https://www.oecd.org/els/family/OECD-Is-Childcare-Affordable.pdf>
- <sup>xxv</sup> Janoch, E. (2021, February). *Vaccine Rollout Costing Methodology* [Docx]. CARE.
- <sup>xxvi</sup> Costs of Delivering COVID-19 vaccine in 92 AMC countries. (2021, February 8). Retrieved from <https://www.who.int/publications/m/item/costs-of-delivering-covid-19-vaccine-in-92-amc-countries>
- <sup>xxvii</sup> Lazarus, J., Ratzan, S., Palayew, A., Gostin, L., Larson, H., Rabin, K., . . . El-Mohandes, A. (2020, October 20). A global survey of potential acceptance of A COVID-19 vaccine. Retrieved from <https://www.nature.com/articles/s41591-020-1124->

9?campaign\_id=154&emc=edit\_cb\_20201021&instance\_id=23359&nl=coronavirus-briefing%2%AEi\_id&segment\_id=41805&te=1&user\_id=f8ac0e64e042cab17bbb7f3ccdc74ab1

<sup>xxviii</sup> 19 world Survey map. (n.d.). Retrieved from <https://covidmap.umd.edu/map/>

<sup>xxix</sup> Figueiredo, A. D., PhD, Simas, C., MSc, Karafillakis, E., MSc, & Paterson, P., PhD. (2020, September 10). Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: A large-scale retrospective temporal modelling study. Retrieved from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31558-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31558-0/fulltext)

<sup>xxx</sup> *Cost estimate for vaccine deployment and vaccination for an epidemic type Ebola* [PDF]. (2016, May). WHO.

<sup>xxxi</sup> Community score Card© (CSC). (2020, July 22). Retrieved, from <https://www.care.org/our-work/health/strengthening-healthcare/community-score-card-csc/>

<sup>xxxii</sup> Janoch, E. (2020, September). *SHE TOLD US SO RAPID GENDER ANALYSIS: Filling the Data Gap to Build Back Equal* [PDF]. CARE.

<sup>xxxiii</sup> Ibid

<sup>xxxiv</sup> Ibid

<sup>xxxv</sup> A powerful partnership. (2021). Retrieved from <http://bihar.care.org/>

<sup>xxxvi</sup> Campbell, J., & Koca, F. (2021, January 07). Financing and protection for the health and care workforce. Retrieved from <https://www.who.int/bulletin/volumes/99/1/20-284380/en/>

<sup>xxxvii</sup> Coronavirus disease (COVID-19): Herd immunity, lockdowns and COVID-19. (2020, December 31). Retrieved from <https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19>

<sup>xxxviii</sup> Scheffler RM, Campbell J, Cometto G, Maeda A, Liu J, Bruckner TA, et al. Forecasting imbalances in the global health labor market and devising policy responses. *Hum Resour Health*. 2018 Jan 11;16(1):5. <http://dx.doi.org/10.1186/s12960-017-0264-6> pmid: 29325556

<sup>xxxix</sup> Royal College of Nursing. "Gender and Nursing as a Profession: Valuing nurses and paying them their worth." January 29, 2020. <https://www.rcn.org.uk/professional-development/publications/pub-007954>

<sup>xl</sup> Boniol, M., Mclsaac, M., Xu, L., Wuliji, T., Diallo, K., & Campbell, J. (2019, March). *Gender equity in the health workforce: Analysis of 104 countries* [PDF]. WHO.

<sup>xli</sup> Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce. *Human Resources for Health Observer - Issue No. 24* (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>

<sup>xlii</sup> Gender policy. (2020). Retrieved from <https://www.gavi.org/programmes-impact/programmatic-policies/gender-policy>

<sup>xliiii</sup> "Triple Impact – how developing nursing will improve health, promote gender equality and support economic growth." 17 October 2016 <https://www.who.int/hrh/com-heeg/triple-impact-appg/en/>

<sup>xliv</sup> Delivered by Women, Led by Men: A Gender and Equity Analysis of the Global Health and Social Workforce *Human Resources for Health Observer - Issue No. 24* (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>

<sup>xlv</sup> Haneef, C., & Kalyanpur, A. (2020). *GLOBAL RAPID GENDER ANALYSIS FOR COVID-19* [PDF]. CARE.

<sup>xlvi</sup> *Coronavirus disease (COVID-19)* [PDF]. (2020, October 11). WHO.

<sup>xlvii</sup> ICN confirms 1,500 nurses have died FROM COVID-19 in 44 countries and estimates that healthcare worker COVID-19 fatalities worldwide could be more than 20,000. (2020, October 28). Retrieved from <https://www.icn.ch/news/icn-confirms-1500-nurses-have-died-covid-19-44-countries-and-estimates-healthcare-worker-covid>

<sup>xlviii</sup> *INTERNATIONAL COUNCIL OF NURSES COVID-19 UPDATE* [PDF]. (2021, January 13). International Council of Nurses.

<sup>xlix</sup> *GLOBAL RAPID GENDER ANALYSIS FOR COVID-19* [PDF]. (2020, March). CARE.

<sup>l</sup> Kidangoor, A. (2020, November 02). India's underpaid women healthcare workers Fight COVID-19. Retrieved from <https://time.com/5904706/india-female-healthcare-workers-covid19/>

<sup>li</sup> 2021: International year of health and care workers. (2021, December 31). Retrieved from <https://www.euro.who.int/en/media-centre/events/events/2021/01/2021-international-year-of-health-and-care-workers>

<sup>lii</sup> Global equitable access To COVID-19 Vaccines estimated to generate economic benefits of at LEAST us\$ 153 billion In 2020–21, and us\$ 466 billion by 2025, in 10 major economies, according to new report by the Eurasia Group. (2020, December 3). Retrieved from <https://www.who.int/news/item/03-12-2020-global-access-to-covid-19-vaccines-estimated-to-generate-economic-benefits-of-at-least-153-billion-in-2020-21>

<sup>liiii</sup> WHO: How the lessons from Ebola are helping AFRICA'S Covid-19 Response | Africa Renewal. (2020, April 3). Retrieved from <https://www.un.org/africarenewal/magazine/who-how-lessons-ebola-are-helping-africa%E2%80%99s-covid-19-response>

<sup>liiv</sup> Umvilighozo G, Mupfumi L, Sonela N *et al*. Sub-Saharan Africa preparedness and response to the COVID-19 pandemic: A perspective of early career African scientists. <https://wellcomeopenresearch.org/articles/5-163>

<sup>liv</sup> Tasamba J: Rwanda uses Ebola experience to combat COVID-19. *Anadolu Agent*. 2020; [Reference Source](#)

<sup>lv</sup> *Urgent Priorities & Financing Requirements at 10 November 2020: Averting the deepening human & economic crisis due to COVID-19* [PDF]. (2020, November 10). WHO.

<sup>lvii</sup> The ACT Accelerator Funding Tracker. World Health Organization Accessed online March 15, 2021. <https://www.who.int/initiatives/act-accelerator/funding-tracker>

<sup>lviii</sup> Interview with VillageReach on their experiences with COVID-19 Vaccines [Interview]. (2021, March 12).

<sup>lix</sup> Protecting lower-income countries with covid-19 vaccines requires global solidarity. (2021, February 9). Retrieved from <https://www.gavi.org/vaccineswork/protecting-lower-income-countries-covid-19-vaccines-requires-global-solidarity>

<sup>lx</sup> World bank APPROVES \$12 billion FOR COVID-19 Vaccines. (2020, October 13). Retrieved from <https://www.worldbank.org/en/news/press-release/2020/10/13/world-bank-approves-12-billion-for-covid-19-vaccines>

<sup>lxi</sup> Ulstein, D. (2021, January 18). Norway will donate extra doses of COVID-19 Vaccines through THE @WHO and @ACTACCELERATOR- backed COVAX facility to be distributed in lower-income countries. we must Ensure vaccines bring hope to all, not just Some. @drtedros. Retrieved from <https://twitter.com/dagulstein/status/1351249359376179200>

<sup>lxii</sup> COVID-19: MEPs want to ensure developing countries' access to vaccines: News: European Parliament. (2021, February 04). Retrieved from <https://www.europarl.europa.eu/news/en/press-room/20210201IPR96811/covid-19-meps-want-to-ensure-developing-countries-access-to-vaccines>

<sup>lxiii</sup> National security memorandum on United States global leadership to strengthen the international COVID-19 response and to ADVANCE global health security and Biological Preparedness. (2021, January 31). Retrieved from <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/21/national-security-directive-united-states-global-leadership-to-strengthen-the-international-covid-19-response-and-to-advance-global-health-security-and-biological-preparedness/>

<sup>lxiv</sup> COVID-19 vaccine introduction Toolkit. (2021). Retrieved from <https://www.who.int/tools/covid-19-vaccine-introduction-toolkit>

## Bibliography

- 19 world Survey map. (n.d.). Retrieved from <https://covidmap.umd.edu/map/>
- 2021: International year of health and care workers. (2021, December 31). Retrieved from <https://www.euro.who.int/en/media-centre/events/events/2021/01/2021-international-year-of-health-and-care-workers>
- A Framework for Equitable Allocation of Vaccine for the Novel Coronavirus. (2020). Retrieved from <https://www.nationalacademies.org/our-work/a-framework-for-equitable-allocation-of-vaccine-for-the-novel-coronavirus#sectionPublications>
- A powerful partnership. (2021). Retrieved from <http://bihar.care.org/>
- ACT Accelerator Funding Tracker, World Health Organization. Accessed online March 15, 2021. <https://www.who.int/initiatives/act-accelerator/funding-tracker>
- Africa Renewal. (2020, April 3). WHO: How the lessons from Ebola are helping Africa's COVID-19 response. Retrieved from <https://www.un.org/africarenewal/magazine/who-how-lessons-ebola-are-helping-africa%E2%80%99s-covid-19-response>
- Arntsen, E. (2020, September 14). If rich countries MONOPOLIZE COVID-19 vaccines, it could cause twice as many deaths as distributing them equally. Retrieved March 05, 2021, from <https://news.northeastern.edu/2020/09/14/if-rich-countries-monopolize-covid-19-vaccines-it-could-cause-twice-as-many-deaths-as-distributing-them-equally/>
- Banks, Christina & Boonstoppel, Laura. "Immunization campaigns during the COVID-19 pandemic: A rapid analysis of the additional operational cost." Accessed online: <https://thinkwell.global/wp-content/uploads/2020/05/COVID-19-impact-on-campaigns-9-June-2020.pdf>
- Boniol, M., Mclsaac, M., Xu, L., Wuliji, T., Diallo, K., & Campbell, J. (2019, March). *Gender equity in the health workforce: Analysis of 104 countries* [PDF]. WHO.
- Campbell, J., & Koca, F. (2021, January 07). Financing and protection for the health and care workforce. Retrieved from <https://www.who.int/bulletin/volumes/99/1/20-284380/en/>
- Community score Card© (CSC). (2020, July 22). Retrieved, from <https://www.care.org/our-work/health/strengthening-healthcare/community-score-card-csc/>
- *Coronavirus disease (COVID-19)* [PDF]. (2020, October 11). WHO.
- Coronavirus disease (COVID-19): Herd immunity, lockdowns and COVID-19. (2020, December 31). Retrieved from <https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19>
- *Cost estimate for vaccine deployment and vaccination for an epidemic type Ebola* [PDF]. (2016, May). WHO.
- Costs of Delivering COVID-19 vaccine in 92 AMC countries. (2021, February 8). Retrieved from <https://www.who.int/publications/m/item/costs-of-delivering-covid-19-vaccine-in-92-amc-countries>
- COVAX FACILITY OPERATIONALISATION AND VACCINE PROGRAMME [PDF]. (2020, December 15). GAVI The Vaccine Alliance.
- COVID-19 and its economic toll on women: The story behind the numbers. (2020, September 16). Retrieved from [https://www.unwomen.org/en/news/stories/2020/9/feature-covid-19-economic-impacts-on-women?qclid=Cj0KCQIAqomBBhDXARIsAFNyUqP-lbwEyfnf0fcleonKCCnEorzHybH-ZOiaU61\\_Gopk8fsg1e3ul0MaAsvbEALw\\_wcB](https://www.unwomen.org/en/news/stories/2020/9/feature-covid-19-economic-impacts-on-women?qclid=Cj0KCQIAqomBBhDXARIsAFNyUqP-lbwEyfnf0fcleonKCCnEorzHybH-ZOiaU61_Gopk8fsg1e3ul0MaAsvbEALw_wcB)
- COVID-19 vaccine introduction Toolkit. (2021). Retrieved from <https://www.who.int/tools/covid-19-vaccine-introduction-toolkit>
- COVID-19: MEPs want to ensure developing countries' access to vaccines: News: European Parliament. (2021, February 04). Retrieved from <https://www.europarl.europa.eu/news/en/press-room/20210201IPR96811/covid-19-meps-want-to-ensure-developing-countries-access-to-vaccines>
- Delivered by women, led by men: A gender and equity analysis of the global health and social workforce. Geneva: World Health Organization; 2019 (Human Resources for Health Observer Series No. 24). Licence: CC BY-NC-SA 3.0 IGO.
- Equal, rapid access To COVID-19 Vaccines won't just save lives; it will save money. (n.d.). Retrieved November, 2020, from <https://www.gavi.org/vaccineswork/equal-rapid-access-covid-19-vaccines-wont-just-save-lives-it-will-save-money>
- Figueiredo, A. D., PhD, Simas, C., MSc, Karafillakis, E., MSc, & Paterson, P., PhD. (2020, September 10). Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: A large-scale retrospective temporal modelling study. Retrieved from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31558-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31558-0/fulltext)
- Gender policy. (2020). Retrieved from <https://www.gavi.org/programmes-impact/programmatic-policies/gender-policy>
- Global equitable access To COVID-19 Vaccines estimated to generate economic benefits of at LEAST us\$ 153 billion In 2020–21, and us\$ 466 billion by 2025, in 10 major economies, according to new report by the Eurasia Group.



- (2020, December 3). Retrieved from <https://www.who.int/news/item/03-12-2020-global-access-to-covid-19-vaccines-estimated-to-generate-economic-benefits-of-at-least-153-billion-in-2020-21>
- *GLOBAL RAPID GENDER ANALYSIS FOR COVID-19* [PDF]. (2020, March). CARE.
  - Hafner, M., Yerushalmi, E., Fays, C., Dufresne, E., & Stolk, C. (2020). *COVID-19 and the cost of vaccine nationalism* [PDF]. Rand Corporation.
  - Haneef, C., & Kalyanpur, A. (2020). *GLOBAL RAPID GENDER ANALYSIS FOR COVID-19* [PDF]. CARE. Human Resources for Health Observer - Issue No. 24 (English, French) March 2019. Accessed online February 18, 2021. <https://apps.who.int/iris/bitstream/handle/10665/311322/9789241515467-eng.pdf?ua=1>
  - ICN confirms 1,500 nurses have died FROM COVID-19 in 44 countries and estimates that healthcare worker COVID-19 fatalities worldwide could be more than 20,000. (2020, October 28). Retrieved from <https://www.icn.ch/news/icn-confirms-1500-nurses-have-died-covid-19-44-countries-and-estimates-healthcare-worker-covid>
  - *INTERNATIONAL COUNCIL OF NURSES COVID-19 UPDATE* [PDF]. (2021, January 13). International Council of Nurses.
  - Interview with VillageReach on their experiences with COVID-19 Vaccines [Interview]. (2021, March 12).
  - Janoch, E. (2020, September). *SHE TOLD US SO RAPID GENDER ANALYSIS: Filling the Data Gap to Build Back Equal* [PDF]. CARE.
  - Janoch, E. (2021, February). *Vaccine Rollout Costing Methodology* [Docx]. CARE.
  - Kidangoor, A. (2020, November 02). India's underpaid women healthcare workers Fight COVID-19. Retrieved from <https://time.com/5904706/india-female-healthcare-workers-covid19/>
  - Lazarus, J., Ratzan, S., Palayew, A., Gostin, L., Larson, H., Rabin, K., . . . El-Mohandes, A. (2020, October 20). A global survey of potential acceptance of A COVID-19 vaccine. Retrieved from [https://www.nature.com/articles/s41591-020-1124-9?campaign\\_id=154&emc=edit\\_cb\\_20201021&instance\\_id=23359&nl=coronavirus-briefing%C2%AEi\\_id&segment\\_id=41805&te=1&user\\_id=f8ac0e64e042cab17bbb7f3ccdc74ab1](https://www.nature.com/articles/s41591-020-1124-9?campaign_id=154&emc=edit_cb_20201021&instance_id=23359&nl=coronavirus-briefing%C2%AEi_id&segment_id=41805&te=1&user_id=f8ac0e64e042cab17bbb7f3ccdc74ab1)
  - National security memorandum on United States global leadership to strengthen the international COVID-19 response and to ADVANCE global health security and Biological Preparedness. (2021, January 31). Retrieved from <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/21/national-security-directive-united-states-global-leadership-to-strengthen-the-international-covid-19-response-and-to-advance-global-health-security-and-biological-preparedness/>
  - Nepomnyashchiy, L. (2020, June 15). Protecting community HEALTH Workers: PPE needs and recommendations for policy action. Retrieved from <https://www.cgdev.org/publication/protecting-community-health-workers-ppe-needs-and-recommendations-policy-action>
  - OECD. "Is Childcare Affordable?" *Policy Brief on Employment, Labor, and Social Affairs*. June 2020. Accessed online: <https://www.oecd.org/els/family/OECD-Is-Childcare-Affordable.pdf>
  - Portnoy, Allison et al. "Producing Standardized Country-Level Immunization Delivery Unit Cost Estimates" *PharmacoEconomics* volume 38, pages995–1005(2020) Accessed online: <https://link.springer.com/article/10.1007/s40273-020-00930-6>
  - Protecting lower-income countries with covid-19 vaccines requires global solidarity. (2021, February 9). Retrieved from <https://www.qavi.org/vaccineswork/protecting-lower-income-countries-covid-19-vaccines-requires-global-solidarity>
  - Royal College of Nursing. "Gender and Nursing as a Profession: Valuing nurses and paying them their worth." January 29, 2020. <https://www.rcn.org.uk/professional-development/publications/pub-007954>
  - Scheffler RM, Campbell J, Cometto G, Maeda A, Liu J, Bruckner TA, et al. Forecasting imbalances in the global health labor market and devising policy responses. *Hum Resour Health*. 2018 Jan 11;16(1):5. <http://dx.doi.org/10.1186/s12960-017-0264-6pmid:29325556>
  - Study shows Vaccine nationalism could cost rich COUNTRIES us\$4.5 trillion. (2021, January 25). Retrieved from <https://iccwbo.org/media-wall/news-speeches/study-shows-vaccine-nationalism-could-cost-rich-countries-us4-5-trillion/>
  - Tasamba J: Rwanda uses Ebola experience to combat COVID-19. *Anadolu Agent*. 2020; Published 2020. [Reference Source](#)
  - Triple Impact – how developing nursing will improve health, promote gender equality and support economic growth.17 October 2016 <https://www.who.int/hrh/com-heeg/triple-impact-appg/en/>
  - Ulstein, D. (2021, January 18). Norway will donate extra doses of COVID-19 Vaccines through THE @WHO and @ACTACCELERATOR- backed COVAX facility to be distributed in lower-income countries. we must Ensure vaccines bring hope to all, not just Some. @drtedros. Retrieved from <https://twitter.com/daquiulstein/status/1351249359376179200>
  - Umvilighozo G, Mupfumi L, Sonela N et al. Sub-Saharan Africa preparedness and response to the COVID-19 pandemic: A perspective of early career African scientists. <https://wellcomeopenresearch.org/articles/5-163>
  - *Urgent Priorities & Financing Requirements at 10 November 2020: Averting the deepening human & economic crisis due to COVID-19* [PDF]. (2020, November 10). WHO.
  - Vaughan, K., Ozaltin, A., Moi, F., Griffiths, U., Mallow, M., & Brenzel, L. (2020, July 18). "Reporting gaps in immunization costing studies: Recommendations for improving the practice." <https://thinkwell.global/wp-content/uploads/2020/07/ICAN-publication-in-Vaccine-X-July-2020.pdf>
  - WHO: How the lessons from Ebola are helping AFRICA'S Covid-19 Response | Africa Renewal. (2020, April 3). Retrieved from <https://www.un.org/africarenewal/magazine/who-how-lessons-ebola-are-helping-africa%E2%80%99s-covid-19-response>

- 
- Wolfson, et al. “Estimating the costs of achieving the WHO–UNICEF Global Immunization Vision and Strategy, 2006–2015” *Bulletin of the World Health Organization* 2008; 86:27–39. Accessed online. <https://www.who.int/bulletin/volumes/86/1/07-045096.pdf?ua=1>
  - World bank APPROVES \$12 billion FOR COVID-19 Vaccines. (2020, October 13). Retrieved from <https://www.worldbank.org/en/news/press-release/2020/10/13/world-bank-approves-12-billion-for-covid-19-vaccines>
  - World Health Organization. “Global Ebola Vaccine Implementation Team (GEVIT): Practical guidance on the use of Ebola vaccine in an outbreak response.” Draft Guidance, May 2016. Appendix K accessed online: [https://www.who.int/csr/resources/publications/ebola/GEVIT\\_guidance\\_AppendixK.pdf?ua=1](https://www.who.int/csr/resources/publications/ebola/GEVIT_guidance_AppendixK.pdf?ua=1).