



PERC

Partnership for Evidence-Based COVID-19 Response

RESPONDING TO COVID-19 IN AFRICA

Finding the Balance

PART IV

Calls to Action



The National Academies of

SCIENCES
ENGINEERING
MEDICINE



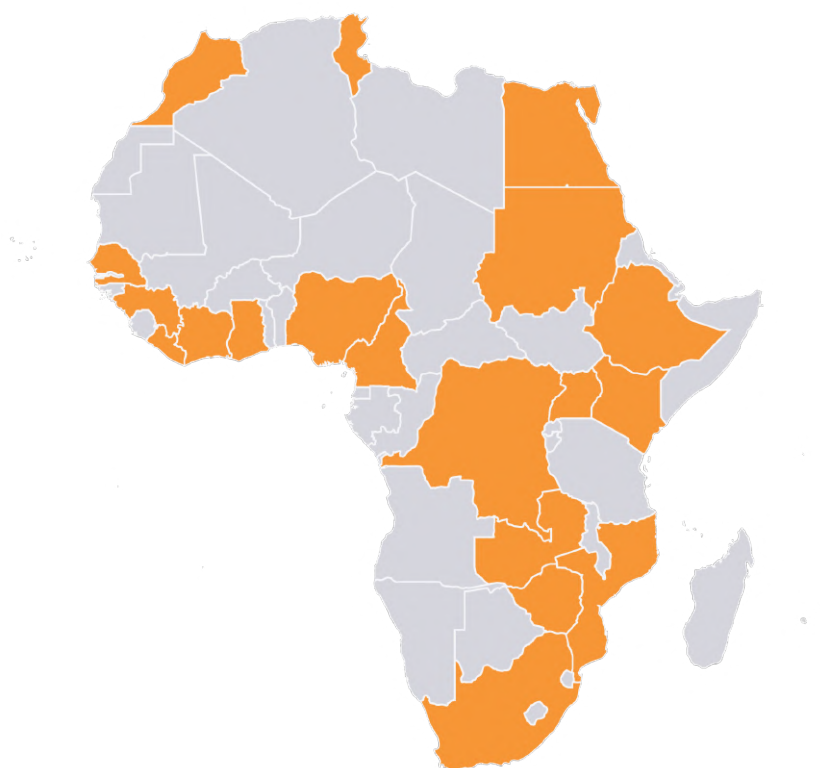
About This Survey

The Partnership for Evidence-Based Response to COVID-19 (PERC) is a public-private partnership that supports evidence-based measures to reduce the impact of COVID-19 on African Union (AU) Member States. PERC collects social, economic, epidemiological, population movement and security data from Member States to help determine the acceptability, impact and effectiveness of public health and social measures (PHSMs) for COVID-19.

This report distills key insights from PERC's fourth survey conducted in September 2021. The survey asked people in 19 AU Member States about their perceptions of PHSMs, vaccines, access to health care, food and income while living through the COVID-19 pandemic. Findings from this survey are compared to those from commensurate surveys conducted in February 2021 and August 2020, alongside the changing epidemiological, political and social contexts, to help identify key findings, policy actions and tools to strengthen outbreak response and preparedness.

The PERC survey was conducted by phone with approximately 23,000 people across 19 Member States in five geographical regions between 10 September to 4 October 2021. The weighted national sample size in each of the surveyed Member States for all surveys was 1,200 completed interviews.

African Union (AU) Member States participating in Survey 4



Dear Colleague,

Since May 2020, the Partnership for Evidence-Based Response to COVID-19 has provided four waves of data to guide decision-making to reduce the impact of COVID-19 across the African Union. This fourth and final report further provides a window into vaccine uptake, with the data illustrating how demand for vaccines is substantially higher than supply.

Our report finds vaccine hesitancy is not a top challenge on the African continent. More than three in four PERC survey respondents indicated that they had been vaccinated or were likely to get vaccinated against COVID-19. In Guinea, Morocco, Mozambique, Tunisia and Zimbabwe, this figure was 90% or higher.

Yet, as of November 2021, less than 7% of Africa's population has been vaccinated against COVID-19. Unpredictable supply and other logistical hurdles, such as gaps in resources to support vaccine delivery and development, continue to pose challenges in meeting a 70% coverage goal. However, this doesn't mean vaccine campaigns are futile. Across the continent, countries have had success in conducting mass vaccination campaigns for other diseases. Consider the case of Ethiopia, where at the height of the pandemic last year, nearly 15 million children were vaccinated against measles.

While we work to scale up COVID-19 vaccine campaigns, PERC data show that individual preventive measures such as mask-wearing, physical distancing and hand-washing have high levels of support, and can be used to stop the spread of COVID-19. These measures will be much more successful in the long-term than measures restricting gathering and movement, or the imposition of travel bans.

Contained within this report are analyses of the COVID-19 situation in Africa, public health and social measures, vaccination and the indirect burdens of the pandemic, all based on timely and complete data. We hope you find the information within useful in guiding decision-making for your country's continued pandemic response.

As demonstrated by the emergence of the Omicron variant, new dangerous variants of the COVID-19 virus may continue to crop up as long as we live in a world where some countries have vaccinated nearly all of their people, while elsewhere people have yet to receive a single shot. Equitable access to safe and effective vaccines should be of great concern to the world.

Yours sincerely,

Dr. John Nkengasong
Director



Calls to action

Call to Action 1

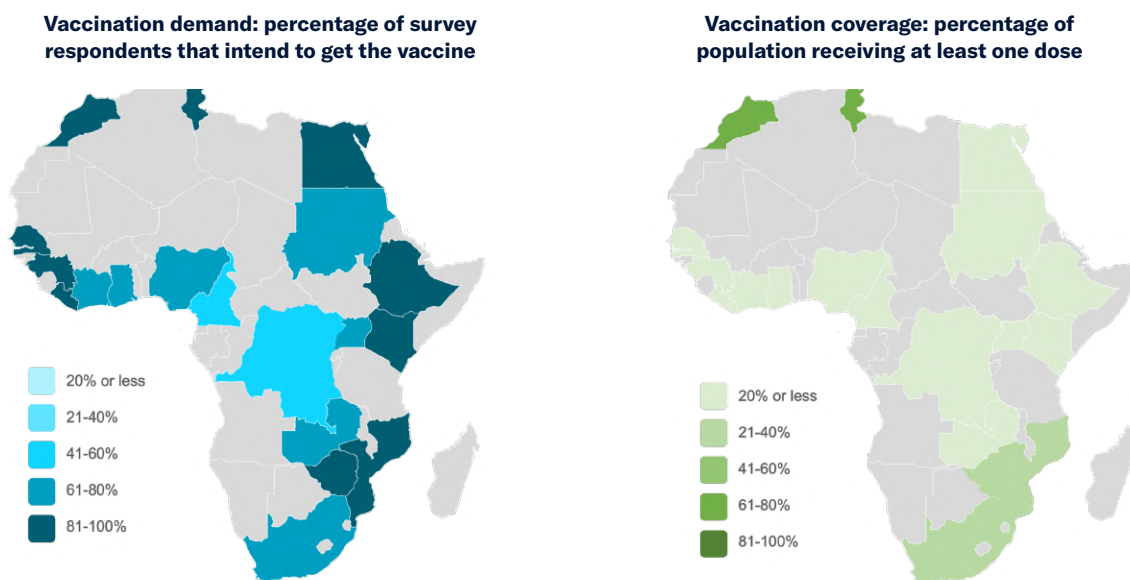
Governments should prioritize strengthening surveillance structures and health data systems.

Timely and complete data are critical to informing COVID-19 response, particularly given the possibility of emerging new variants, like Omicron. Such data also help improve the public’s situational awareness and preparedness for future outbreaks. Limited or incomplete reporting of cases, hospitalizations, testing capacity and deaths continues to hinder a complete understanding of the impact of COVID-19 in Africa. With renewed attention on emerging infectious diseases, it is critical to strengthen surveillance and reporting systems to facilitate preparedness and respond quickly to new health threats.

Call to Action 2

Reliable supply of safe and effective COVID-19 vaccines is necessary but not sufficient. The global community should support vaccine delivery with resources and expertise to ensure coverage.

The September 2021 PERC survey found a large gap between rates of vaccine acceptance and reported vaccine coverage in almost all AU Member States included in the survey, revealing a sizable unmet demand for vaccination. Unpredictable vaccine supply – in terms of volume, timing and shelf life, as well as unreliable supply of associated medical commodities – threatens states’ ability to meet the demand needed for scaled vaccination campaigns. In addition, Member States should review vaccine coverage targets to ensure that at-risk populations and eligibility criteria align with the local context. Even with sufficient vaccine supply, reported intention to get vaccinated does not always translate to vaccines in arms. Vaccine campaigns and donor support must address the various context-specific bottlenecks to eliminate barriers to access, especially where COVID-19 risk perception and institutional trust are low and secondary burdens are high.



Percentage of population with at least one vaccine dose is displayed as of 1 December 2021. Grey indicates countries not surveyed by PERC.

Calls to action

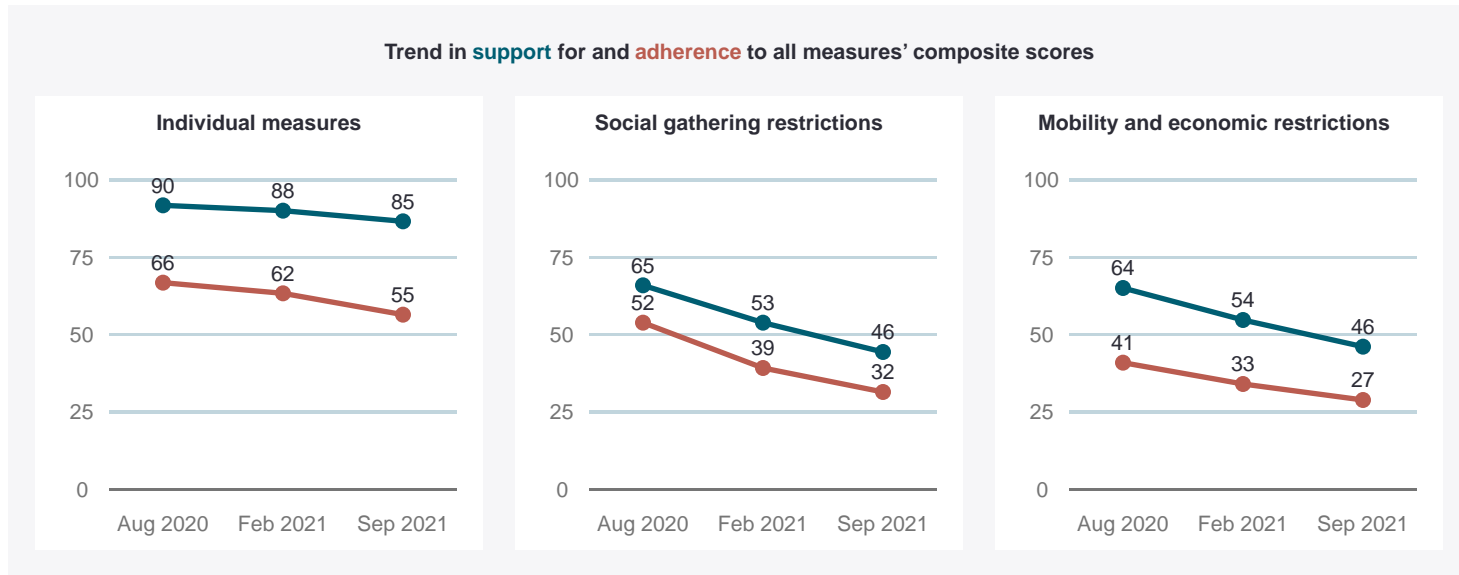
Call to Action 3

Public health and social measures (PHSMs) are critical tools for mitigating COVID-19 transmission, particularly as new, possibly more transmissible, variants emerge in under-vaccinated populations. Governments and public health partners should promote adherence to PHSMs as a top priority.

Masks, hand-washing and social distancing – known as individual PHSMs – work, and 85% of the PERC survey respondents reported support for these measures. However, adherence has continued to decrease over time, underscoring the urgent need to strengthen risk communication strategies. Declining adherence was especially pronounced for measures restricting social gatherings (such as avoiding places of worship and public gatherings/entertainment) and for measures restricting mobility and economic activity (such as limiting trips to the market and staying home from work or school), likely due to the secondary impacts of these measures. Reports of unemployment and reduced access to food among survey respondents were widespread and worsening over time, making adherence to restrictive PHSMs ever more challenging.

To encourage large-scale adherence to PHSMs, it is imperative for governments to disseminate accurate information through trusted channels and offer support to mitigate the impact of secondary burdens, particularly as Africa enters a fourth COVID-19 wave.

Trend in support for and adherence to all measures' composite scores



Individual measures refer to mask-wearing, handwashing and avoiding handshakes; Social gathering restrictions refer to avoiding social and religious gatherings; Mobility and economic restrictions refer to reducing trips to the market and staying home.

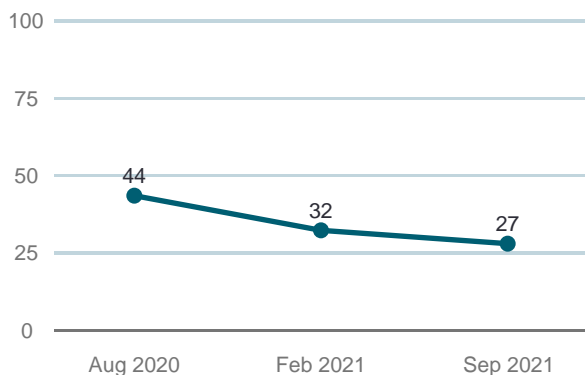
Call to Action 4

The global community and national governments should invest — to the fullest extent possible — in public health infrastructure and social protection programs that build and maintain resilience, in order to improve health and economic outcomes and reduce the opportunity costs of vaccination and PHSM adherence.

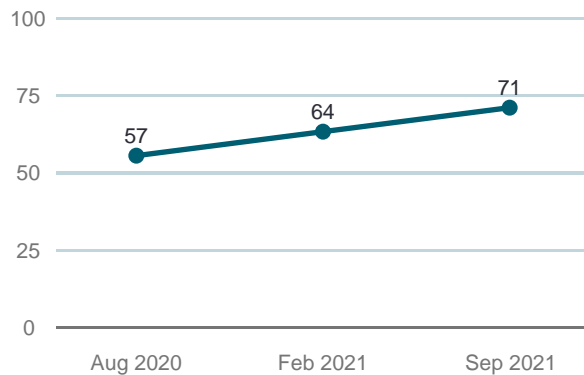
As is the case in much of the world, the pandemic has disrupted health care systems across Africa, caused widespread income loss and reduced access to food. The health care workforce in Africa is depleted, largely unvaccinated and in dire need of support. PERC survey respondents reported that barriers to accessing health care are abating compared to earlier in the pandemic; there is a window of opportunity now to invest in health care workers and public health infrastructure to support COVID-19 vaccine delivery, care and prevention in the near term, as well as repair and restore health service delivery and accelerate health care innovation and technology over the long term.

Worsening income loss and rising food prices have posed dual burdens on vulnerable populations, largely driven by pandemic-induced PHSMs (including the recent spate of travel bans), inflation and supply chain disruptions. The global community must substantially increase investments in social protection programs while supporting efforts to reduce sovereign debt obligations to mitigate the immediate harm caused by the pandemic. This can help bolster local economies to prevent a prolonged economic recession and mitigate food insecurity, which is on the rise.

Trend in percentage of households skipping or delaying health care visits in the past six months



Trend in percentage reporting that cost is a barrier to food access



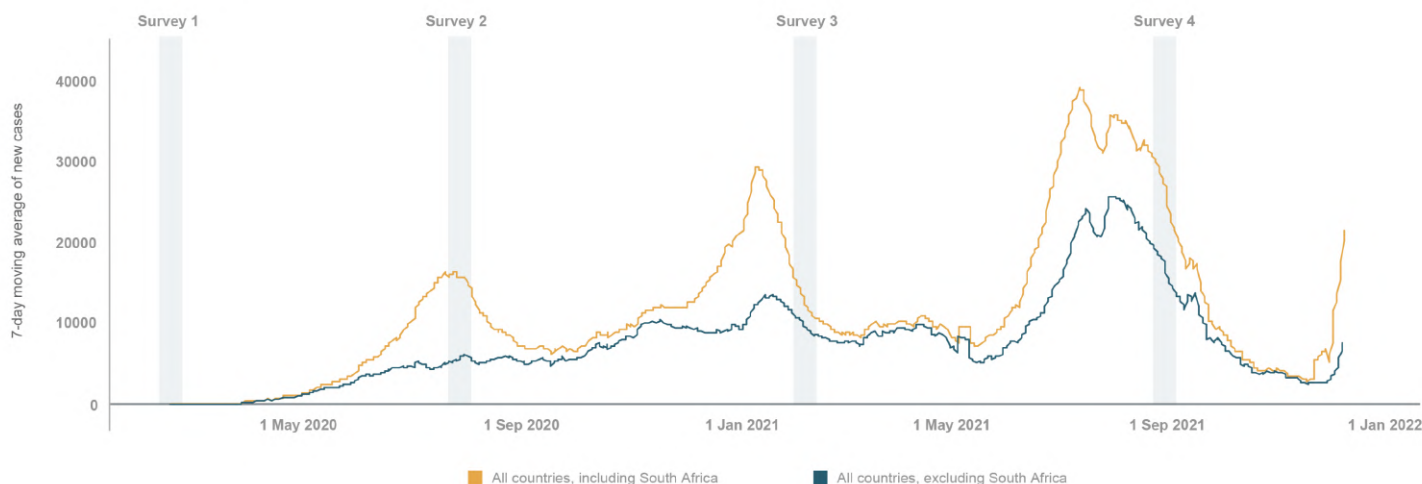
Situational Awareness

When the September 2021 PERC survey was fielded, Member States had recently experienced a surge of COVID-19 infections driven by the highly-transmissible Delta variant first detected in a sample from Morocco on 3 May 2021. The Delta-driven wave, which occurred between May and August 2021, had a broader (albeit variable) impact across Member States than prior COVID-19 surges. With some exceptions, Member States in the Southern and Northern regions experienced [acute surges](#) in cases and deaths that were considerably larger than previous waves. In contrast, most Member States in Western and Central Africa reported peak caseloads comparable to or smaller than previous waves. Even so, health facilities and health care workers were strained, and COVID-19 control measures restricting movement and economic activity led to high levels of unemployment and civic discontent across the continent.

THE EMERGENCE OF THEOMICRON VARIANT AND ITS POTENTIAL IMPACT

The PERC survey was conducted before the Omicron variant emerged. On 26 November 2021, the World Health Organization (WHO) classified a new SARS-CoV-2 variant, B.1.1.529, a “Variant of Concern” and named it Omicron. This variant was first reported to WHO by South African authorities on 24 November. Within days, it had been detected on nearly every continent. The international community’s response to Omicron was swift, with travel bans implemented across African countries, specifically in the Southern region. Reports of alarm over the variant were flooding social media, with #omicron trending in South Africa. The emergence of Omicron and surrounding media coverage coincided with a sudden uptick in cases and hospitalizations in South Africa and reports of Omicron cases all over the world. The travel restrictions imposed on African countries are likely to exacerbate unemployment and income loss, as well as reduce access to food and essential commodities on the continent.

Persistent limitations in data and surveillance systems continue to [hinder](#) a complete understanding of COVID-19 incidence on the African continent. [A recent WHO analysis](#) concluded that as many as 86% of cases have not been detected in Africa. When cases peaked, Africa recorded among the highest case-fatality rates in the world, exceeding 3% in some Member States. However, death reporting was also incomplete. Testing infrastructure and disease surveillance systems are critically important for guiding the ongoing COVID-19 response and management of other diseases with epidemic potential.



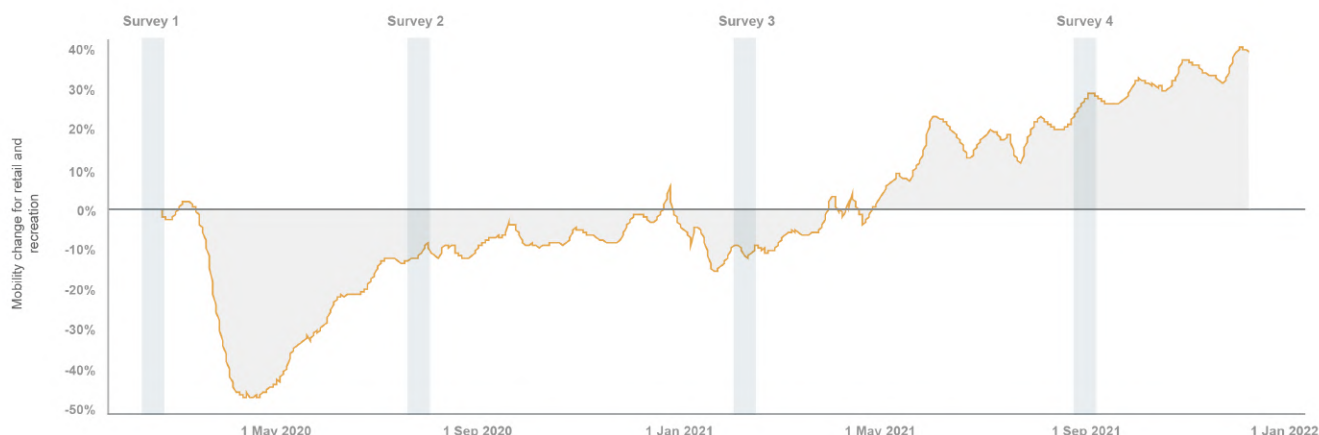
Source: Africa Centres for Disease Control and Prevention, data as of 10 Dec 2021

PHSM implementation in response to the spread of the Delta variant varied widely across the continent. Nightly curfews and mask requirements were generally in place throughout 2021 in a majority of Member States. Mobility restrictions and other measures to limit gatherings were implemented in a more targeted manner in local hotspots, or not at all. There was a substantial uptick in population mobility aligning with the Delta surge in cases, in contrast to drops in mobility during the first and second COVID-19 waves on the continent.

MOBILITY PATTERNS AND PHSM

On average, mobility levels were strikingly higher from May 2021 onwards than during prior waves. Mobility patterns varied among Member States based on the types of PHSMs in place and their level of enforcement.

For instance, Uganda, Mozambique and South Africa had consistently low levels of mobility, in line with strictly enforced mobility restrictions throughout the pandemic. Cameroon, Côte d'Ivoire, Ghana, Kenya and Nigeria all had mobility levels higher than baseline in spite of rising case counts, likely due to a combination of very few national PHSMs and more local, hotspot-focused enforcement of mobility restrictions. Mobility levels in Zambia and Zimbabwe were also higher than baseline during their respective Delta surges, as PHSMs were either not put in place or were poorly enforced.



Source: Google Mobility Report

Note: Not all Member States have mobility data available. Mobility data is shown as an aggregate for the following: Angola, Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Egypt, Gabon, Ghana, Guinea-Bissau, Kenya, Libya, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

Vaccine access has been obstructed by the inequitable distribution of limited vaccine supply, discrepancies between promised and delivered supply and lack of implementation support. As of early December 2021, reports show that only 12% of the African population had received at least one dose of COVID-19 vaccine, while the United States had vaccinated more than 70% of its population with at least one dose. Unreliable supply and barriers to promoting effective vaccination campaigns have undermined uptake to date. Low vaccination coverage may contribute to high transmission rates, impacting essential health services and increasing the risk that new variants of concern may emerge.

Secondary burdens, including reduced access to income, food and health care have been exacerbated by the pandemic. COVID-19 severely [impaired](#) economic growth across Africa and plunged the continent into a recession, with average GDP contracting by 2% in 2020. The ongoing pandemic has the potential to push over 40 million additional people into extreme poverty. Due to macro-level factors affecting agricultural outputs and export prices, it is also likely to increase [food insecurity](#) and [unemployment](#) across the region. In the most recent PERC survey, respondents cited access to income and employment as their greatest concern, followed by COVID-19 and access to food. Health systems are stretched as health care workers [continue](#) to be under-resourced, overworked and underpaid. Public health gains from the past several decades are either at a [standstill](#) or [reversing](#), which is alarming and devastating for already-fragile health systems.

Top concerns

1	Access to income/work/unemployment	55%
2	COVID-19 pandemic	39%
3	Access to food	26%
4	Education	19%
5	Other health concerns	16%

Data from Sep 2021 PERC Survey

Insecurity and conflict continue to exacerbate income and food precarity in many Member States. Military coups took place in both Sudan and Guinea close to the fielding of the survey. The Tigray crisis in Ethiopia has plunged further into a humanitarian catastrophe and northern Nigeria, eastern Democratic Republic of the Congo (DRC) and northern Mozambique continue to face violence and insecurity. Many Member States are also seeing an uptick in civil unrest related to the increasing burden of PHSMs, particularly Tunisia and Nigeria.

Key Takeaway

Africa's COVID-19 landscape has been changing since March 2020. Where reported cases previously came primarily from South Africa, the Delta variant has generated higher caseloads across the continent. Vaccination efforts began in early 2021, but have been marked by significant supply challenges, leaving more than 90% of the African population unvaccinated. PHSM implementation transitioned from a widespread lockdown strategy to a more targeted approach, with the goal of mitigating secondary burdens. Even so, unemployment, loss of income, rising food prices and worsening health outcomes persist due to the combined effects of the pandemic and ongoing and/or underlying political and social conflict.

Support for and Adherence to PHSMs

Context

After many Member States implemented strict lockdown measures to stem the transmission of COVID-19 in early 2020, policies have become more targeted and heterogeneous across the continent. While PHSMs can have considerable secondary economic and health burdens, they are critical policy interventions to limit the spread of COVID-19, especially in the context of low vaccination supply and coverage and emerging variants of concern, such as Omicron.

THE OMICRON VARIANT AND ITS POTENTIAL IMPACT ON RISK PERCEPTION

As Omicron continues to spread and COVID-19 cases surge, governments have already started to reinstate PHSMs. In addition, narratives have already started circulating on social media that the Omicron variant is an “African disease” that benefits pharmaceutical companies involved in the “COVID-19 business.” Such narratives could threaten accurate perception of risk of the Omicron variant.

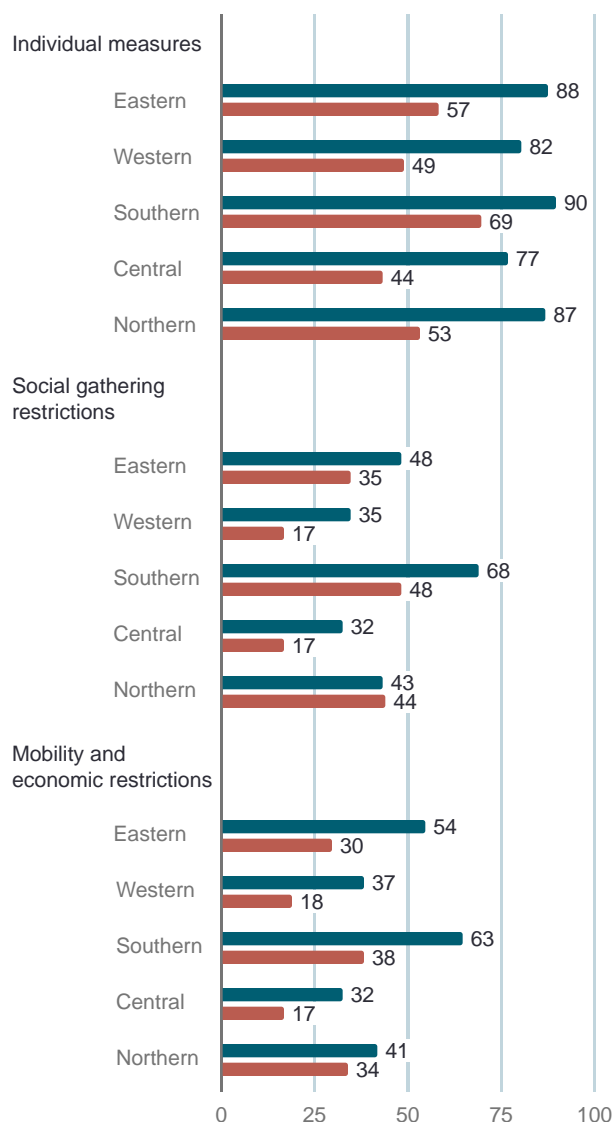
A change in risk perception is likely to impact support for and adherence to these PHSMs, particularly where Omicron is a top concern. Policymakers and health officials should continue to assess the impact of Omicron on risk perception and adjust messaging, address misinformation and leverage increasing media attention to reinforce key messages promoting adherence to PHSMs and vaccination.

Trends in Support and Adherence

The highest levels of support for PHSMs were found in the Southern region, which experienced among the worst Delta-driven waves of recent infections. Meanwhile, respondents from the Central and Western regions, where fewer cases were recorded, reported on average the lowest levels of support for PHSMs. Trends in self-reported adherence generally followed support for PHSMs.

However, self-reported adherence tended to be considerably lower. Numerous factors may explain the differences between support and self-reported adherence, including the existence, stringency and enforcement of PHSMs, perception of COVID-19 risk, trust in institutions and structural factors that help determine respondents’ ability to adhere to PHSMs (e.g., access to face masks, employment demands, income loss, conflict and access to health services and clean water).

Percentage of respondents reporting support for and adherence to measures’ composite score



Regional comparisons were conducted as per the following categories: Eastern Africa (Ethiopia, Kenya, Uganda, Sudan); Western Africa (Ghana, Nigeria, Liberia, Guinea Conakry, Senegal, Côte d'Ivoire); Northern Africa (Tunisia, Morocco, Egypt); Central Africa (Cameroon, Democratic Republic of Congo); and Southern Africa (Mozambique, South Africa, Zambia, Zimbabwe).

The Role of Risk Perception and Trust in PHSM Support and Adherence

Across the surveyed Member States, support for and self-reported adherence to every PHSM were highest among respondents who perceived themselves to be at high risk for COVID-19 infection. For measures restricting **social gatherings** (e.g., avoiding places of worship and public gatherings/entertainment) and **mobility and economic activities** (e.g., limiting trips to the market and staying home from work or school), respondents reporting high risk perception reported support for and adherence to these PHSMs over 10 percentage points more often than those with low perception of personal risk. For **individual measures** (e.g., wearing face masks, hand-washing and avoiding handshakes), risk perception appeared to influence respondents' self-reported adherence more than their support.

Higher personal risk perception and satisfaction with the government's response to the pandemic were each associated with higher levels of support for and self-reported adherence to PHSMs.

Support (PHSMs)	Perception of personal COVID-19 risk		Satisfaction with government's pandemic response	
	Low to me	High to me	Low satisfaction	High satisfaction
Individual measures	83%	87%	78%	88%
Social gathering measures	40%	52%	37%	48%
Mobility and economic restrictions	41%	54%	37%	48%
Adhere to (PHSMs)	Perception of personal COVID-19 risk		Satisfaction with government's pandemic response	
	Low to me	High to me	Low satisfaction	High satisfaction
Individual measures	52%	61%	48%	58%
Social gathering measures	26%	39%	28%	32%
Mobility and economic restrictions	22%	35%	23%	28%

Since the August 2020 PERC survey, **risk perception** has remained largely stable across the surveyed Member States, despite changing disease dynamics, evolving access to vaccines and therapies and enhanced scientific understanding of the disease over time. However, there have been notable regional trends. For example, in the Northern region, risk perception rose between August 2020 and February 2021, and was stable through September 2021. In the Western and Central regions, risk perception has decreased in each survey since August 2020. Notably, risk perception in the Southern region has been about 10 points higher than in any other region in each survey round. In the most recent survey, a quarter of all respondents (25%) reported having high or very high personal risk perception. This was highest in the Southern region (34%) and lowest in the Western region (20%), with the Eastern (27%), Northern (26%) and Central (22%) regions falling in between.

PERC survey data also revealed a strong association between measures of **trust in public health institutions** and support for and self-reported adherence to PHSMs. Support for and self-reported adherence to every PHSM were higher among respondents who expressed satisfaction with the government's handling of the pandemic compared to those who did not.

Individual PHSMs

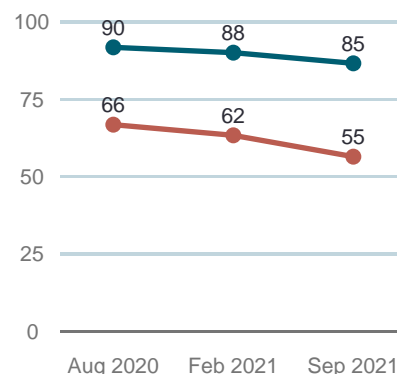
Individual PHSMs, such as wearing a face mask, washing hands and social distancing, are critical for effective COVID-19 response. Individual measures are high-impact, but low-cost, allowing Member States to maintain mitigation methods while limiting the secondary burden on communities. Survey results showed that support for each individual-level PHSM remained above 85% across the continent, while self-reported adherence was lower, reported by only 55% of respondents. Support for individual PHSMs has remained high across all four survey rounds. Self-reported adherence has decreased by 11 percentage points since the August 2020 survey.

	Wearing a face mask	Washing hands	Avoiding physical greetings	Composite
Support	95%	96%	90%	85%*
Self-reported adherence	82%	82%	66%	55%**

*Range: Ethiopia (93%) - Nigeria (68%)

** Range: South Africa (82%) - Cameroon (33%)

Trend in support for and adherence to individual measures composite score



Unlike other measures, such as limits to gathering sizes and stay-at-home orders, individual PHSMs have undergone fewer policy changes, with most Member States retaining long-standing mandates on indoor mask-wearing and recommendations on social distancing and hand-washing. Therefore, falling rates of self-reported adherence are more likely to reflect respondents' individual decisions and the extent of enforcement, than shifts in policy. Those with low personal risk perception reported adhering to individual measures less than those with high risk perception (52% vs. 61%). These findings suggest that communication campaigns disseminating accurate COVID-19 information may help increase individual PHSM adherence.

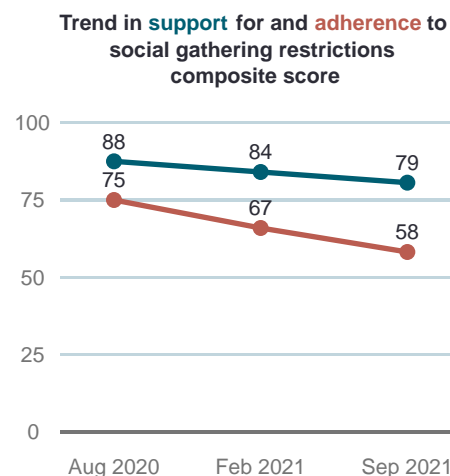
Measures Restricting Social Gatherings

Compared to individual measures, support and self-reported adherence were lower for measures restricting social gatherings (e.g., avoiding places of worship, public gatherings and places of entertainment). Both have fallen since the August 2020 survey. However, there was considerable variability by Member State. Regional trends in self-reported adherence aligned closely with levels of support, with the lowest levels reported in the Western and Central regions and the highest levels in the Southern region.

	Avoiding places of worship	Avoiding public gatherings and places of entertainment	Composite
Support	50%	79%	46%*
Self-reported adherence	40%	59%	32%**

*Range: Zimbabwe (77%) - DRC (26%)

** Range: South Africa (64%) - Ethiopia (9%)



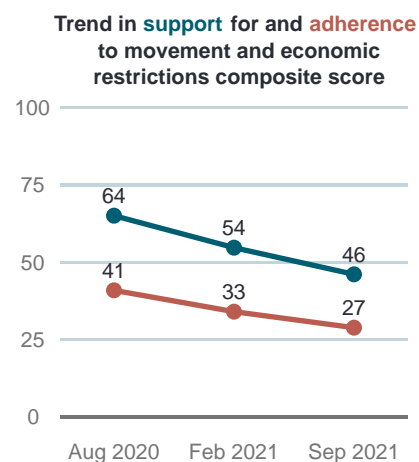
The reduction in self-reported adherence to social gathering restrictions reflects a changing policy landscape over time. Support for public gathering restrictions was considerably higher than support for religious gathering restrictions. Should additional COVID-19 waves emerge, the public may have greater interest in adhering to tightening restrictions on public gatherings than places of worship. During large COVID-19 surges, policymakers may find greater political support for and potential adherence to safer worship practices (e.g., outdoor services, distancing) than full bans on religious services.

Measures Restricting Movement and Economic Activity

Support for and self-reported adherence to measures restricting movement or economic activity have followed trends similar to restrictions on public gatherings. Both support and self-reported adherence have fallen with each survey since August 2020. Support for mobility restrictions was highly variable between Member States. While seven in 10 respondents supported staying home from work or school in Zimbabwe (74%), Mozambique (75%), Egypt (73%), South Africa (70%) and Uganda (69%), these measures were supported by no more than three in 10 respondents in Guinea (30%), Côte d'Ivoire (24%) and Tunisia (18%). Self-reported adherence was much lower for staying home. Among 14 of the 19 Member States surveyed, less than four in 10 reported adhering. However, the shift to more targeted restrictions, or their complete elimination, may help explain the lower levels of adherence to mobility and economic restrictions.

	Staying home from work or school	Reducing trips to the market	Composite
Support	51%	73%	46%*
Self-reported adherence	37%	48%	27%**

*Range: Egypt/Zimbabwe (69%) - Tunisia (17%)
 ** Range: South Africa (56%) - Côte d'Ivoire (11%)



Most Member States have enacted evening curfews during periods of increased transmission. However, restrictions limiting daytime movement (common at the beginning of the pandemic) have largely been eliminated, as reflected by increasing population-level mobility. In addition, increasing secondary burdens, such as reduced access to income and food, make supporting and adhering to restrictions of movement and economic activity especially difficult. This underscores the need for more robust social protection programming, especially if governments wish to enact new mobility restrictions in response to future surges.

Key Takeaway

Individual PHSMs remain highly supported across the region. However, adherence is lower and has been declining over the past year. Since individual measures produce relatively few secondary economic burdens, the PERC data supports the continued utility of mask-wearing, hand-washing and social distancing measures and the need to further strengthen adherence. If a new wave of infections requires more aggressive PHSMs, governments should target supported measures to specific locations/populations and work to mitigate secondary PHSM impacts. They also should direct greater resources into communication campaigns to increase public understanding of COVID-19 risk.

Vaccine Supply, Delivery, Acceptance and Hesitancy

Context

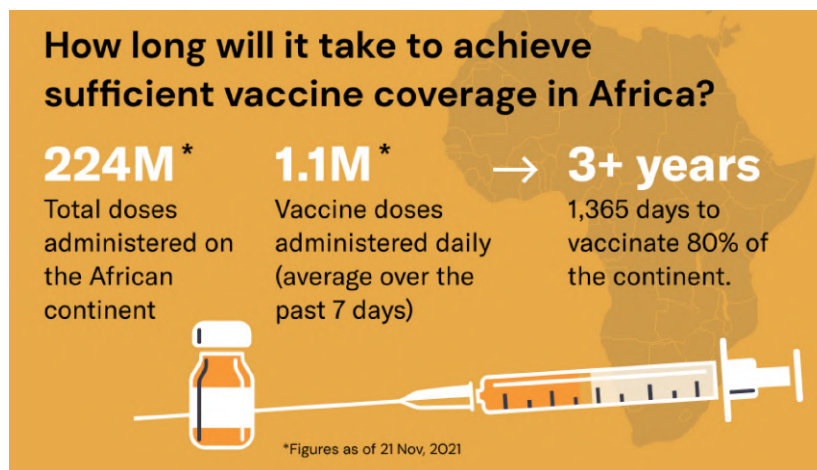
Safe and highly effective COVID-19 vaccines have been available for nearly one year, but many people in low- and middle-income countries (LMICs) have yet to receive a single shot. Despite efforts of the African Vaccine Acquisition Trust (AVAT) and the COVAX facility to expand vaccine access, [only three African countries have reached](#) the end-of-year WHO vaccination coverage target of 40%, as of December 2021. These shortcomings are due to vaccine supply shortages and distribution inequity; a lack of infrastructural support, including supply chain issues; and a lack of support for public health systems that can help address vaccine hesitancy.

Vaccine Supply Shortages and Distribution Inequity

An insufficient number of vaccine doses has been promised to LMICs, and the actual supply delivered has been even lower than expected. Global production targets for 2021 totaled [20.8 billion doses](#), but manufacturers' current projections suggest that only about 12 billion doses will be produced by the end of the year — nearly 50% below target.

Inequitable vaccine distribution is largely due to vaccine manufacturers' failure to expand production or transfer technology to increase supplies. Many HICs have purchased more than five doses per person. Countries can help mitigate help mitigate distribution inequity by donating surplus doses. However, as of

November 2021, less than 15% of donated doses had actually been delivered. Greater pressure must be placed on vaccine manufacturers and nations that have received a surplus of doses to increase vaccine production, support hands-on technology transfer and speed delivery of promised vaccine doses to LMICs.



Source: Global Commission for Post-Pandemic Policy

Infrastructural Support and Public Health System Resources

Some progress has been made in COVID-19 vaccine delivery to LMICs. However, the pace of the vaccine rollout has not been adequate. A number of bottlenecks have surfaced, which are challenging to address in the face of unpredictable vaccine supply. Manufacturers, donor countries, AVAT and COVAX must work collaboratively with recipient governments to enable advanced vaccination campaign planning. This will help address the many logistical bottlenecks to vaccine rollout. As vaccine supply increases in many countries, efforts to identify and address barriers to getting shots into arms are critical. Without immediate, coordinated support to address these bottlenecks, the pace of vaccination will remain slow, in spite of the great demand for COVID-19 vaccination in AU Member States reflected in the most recent PERC survey.

INFRASTRUCTURE AND SUPPLY CHAIN

A mass vaccination campaign with different vaccine types, storage requirements, expiration dates and dosing schedules is challenging in the face of unpredictable supply.

Supplies to administer vaccines

Shortages of supplies such as syringes can delay vaccine rollout.

Cold chain

Vaccines must be stored at cold temperatures and may compete with other vaccines and medicines for limited space.

Logistical support

Coordination of supply chains, human capacity, transportation and other logistics is essential, particularly for reaching last mile communities.

Expiration

Delivery of donated vaccine doses close to their expiry dates leaves countries unprepared to plan and forces them to discard doses.



PUBLIC HEALTH SYSTEMS

Existing human resources may be insufficient to manage a vaccination campaign — particularly in addition to competing public health priorities.

Data monitoring

Systems monitoring vaccine uptake and safety must be prepared to encompass COVID-19 vaccine data.

Risk communication

Timely, targeted and accurate messaging on vaccines is critical to engage communities, address any questions and dispel misinformation.

Limited Financial Resources

Dedicated funding for health care is often limited and may be disproportionately allocated to COVID-19 response, leaving limited resources to support the essential health infrastructure necessary to reach last mile communities — including paying health care workers.

Logistical bottlenecks to vaccine rollout

* This is not an exhaustive list, and country-specific contexts must be taken into account.

Vaccine Acceptance

In September 2021, more than three in four survey respondents (78%) reported vaccine acceptance, defined as either receiving at least one dose of a COVID-19 vaccine or planning to get vaccinated. This is a substantial increase from February 2021, when 67% of surveyed respondents expressed intent to get vaccinated. Rates of vaccine acceptance varied widely by Member State, ranging from 43% in Cameroon to 97% in Morocco. Acceptance rates were influenced by **trust in key people and institutions** and their handling of the pandemic; perceived **risk** of COVID-19 to oneself and one's country; age; trust in the vaccines; and the availability of **information**. Note that vaccine mandates in some Member States emerged around the time the survey was fielded, which may have influenced vaccination intent responses.

Overall, those who reported having **trust in government institutions' handling of the pandemic** also reported vaccine acceptance at a higher rate (82%) than those who reported a lack of trust (66%). Only two Member States saw a decline in vaccine acceptance between February and September 2021: Nigeria (from 72% to 64%) and Uganda (from 85% to 79%). Decreased satisfaction with both governments' pandemic response was evident. Nigeria reported a decline from 65% to 52% and Uganda's rate dropped from 82% to 72%.

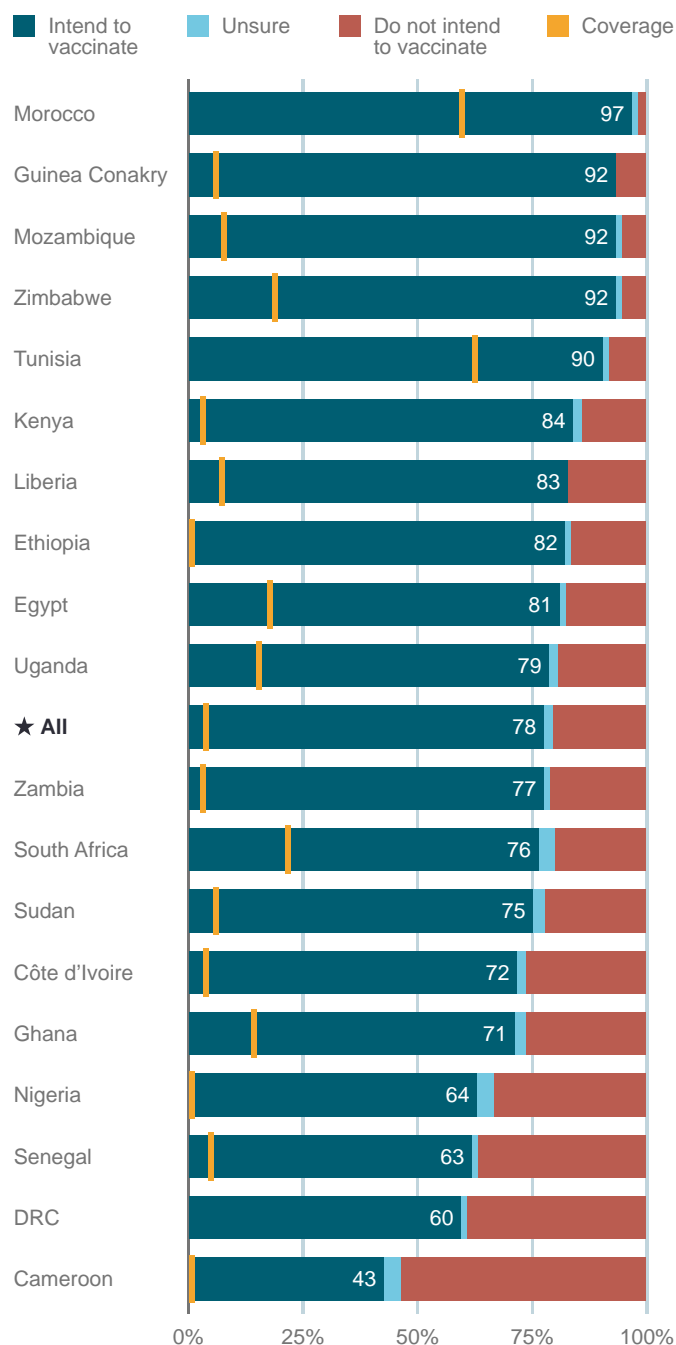
However, there were exceptions to the positive relationship between high levels of satisfaction in government institutions and rates of vaccine acceptance in some Member States. For example, 77%-80% of respondents in DRC reported trusting the Ministry of Health and president, but vaccine acceptance was 60% — almost 20 percentage points lower than the Africa regional average of 78%.

This suggests that other factors, such as low and inconsistent [vaccine supply](#), low risk perception (22%) and a younger age distribution among respondents (73% of DRC respondents were 35 years of age or younger) may have influenced the rates of reported vaccine acceptance in DRC.

Misinformation and global narratives also influence decision-making. For example, the strong [global reaction](#) to adverse events associated with Astra-Zeneca's vaccine at the beginning of Africa's vaccine roll-out very likely had a lasting impact on vaccine acceptance and product choice in many Member States, including DRC.

The PERC data suggest that vaccine acceptance is also likely influenced by risk perception. Liberia had the highest percentage of respondents reporting high personal **risk perception** in the Western region (31%), where 83% of respondents reported vaccine acceptance. Similar trends were observed in Egypt (31% and 81%), South Africa (43% and 76%) and Mozambique (38% and 92%).

Respondents' vaccine intentions compared to national coverage rates



Respondents in these four Member States also reported COVID-19 and viral variants among their top concerns at the time of the survey. Among the survey respondents who agreed that COVID-19 would affect many people in their country, most expressed COVID-19 vaccine acceptance rather than a lack of intention to get vaccinated (70% vs. 57%).

In addition, older survey respondents, and those reporting a longstanding illness, from all Member States reported higher rates of vaccine acceptance, possibly due to having greater risk awareness and experience with longstanding illness.

Hesitancy

Among all survey respondents, 20% said they were not vaccinated and did not intend to get vaccinated, ranging from 2% in Morocco to 52% in Cameroon. The top reasons for vaccine hesitancy were low risk perception (24%), not having enough information about the vaccine to make a decision (22%) and a lack of trust in the government (17%).

Reports of supply interruptions, product expiration and syringe shortages can erode public willingness and confidence in getting vaccinated. The reasons for low **risk perception** are complex, but not immovable. By promoting greater COVID-19 information through trusted messengers and providing a more consistent and reliable vaccine supply, governments can help transform vaccine hesitancy into acceptance.

Respondents said they wanted more **information** about vaccine safety, key ingredients and how the vaccines work. Numerous existing [social media](#) and [influencer campaign](#) toolkits can be leveraged by Member States to educate the public on these and other COVID-19 vaccine topics, with a focus on promoting greater uptake.

As was mentioned in Section 2, information must be disseminated through **trusted people and institutions** (specific country-level data can be found in the [PERC country briefs](#)). For example, almost three in five respondents (59%) reported trusting COVID-19 information disseminated by religious leaders, suggesting a clear strategy to leverage religious leaders – as is already being done in many Member States – to distribute accurate information on COVID-19 and vaccines to help improve acceptance.

Top reasons for vaccine hesitancy

1	I do not feel I am at risk of catching the virus	24%
2	I do not yet know enough about the vaccine to make a decision	22%
3	Lack of trust i.e vaccine, Government	17%
4	The vaccine is killing people/it is a deadly vaccine	16%
5	Afraid of injections	16%

Data from Sep 2021 PERC Survey

Top information wanted

1	Vaccine types, contents and how it works	37%
2	How effective is the vaccine	29%
3	How safe is the vaccine	28%
4	What are the main side effects and are they painful/serious	26%
5	When people will be eligible to receive it	16%

Data from Sep 2021 PERC Survey

There is also an opportunity to reduce vaccine hesitancy by making a connection between **vaccination and safe work**. Access to income was the leading concern of respondents across all surveyed Member States — more than half (55%) reported unemployment and access to work among the most concerning issues they currently face. Vaccine mandates for employees in the formal labor workforce were announced in [Zimbabwe](#), [Nigeria](#), [Ghana](#), [Egypt](#) and [Kenya](#), but these measures are unlikely to impact members of the informal workforce. Greater promotion of messages emphasizing vaccination as a way to work safely outside the home and protect vulnerable family members may help improve uptake in places without mandates.

Key Takeaway

There is a large gap between coverage and acceptance in almost all Member States. Nigeria, DRC and Ethiopia — among the most populous Member States — have fewer than 5% of their populations vaccinated with at least one vaccine dose, while PERC data show acceptance is between 60% and 80%. Vaccine acceptance does not necessarily translate into getting shots into arms. Reliable vaccine supply and distribution support are critical, along with the strategic dissemination of vaccine information, misinformation management and addressing local, contextual factors posing barriers to promoting greater uptake.

Trust, Information and Communication

Context

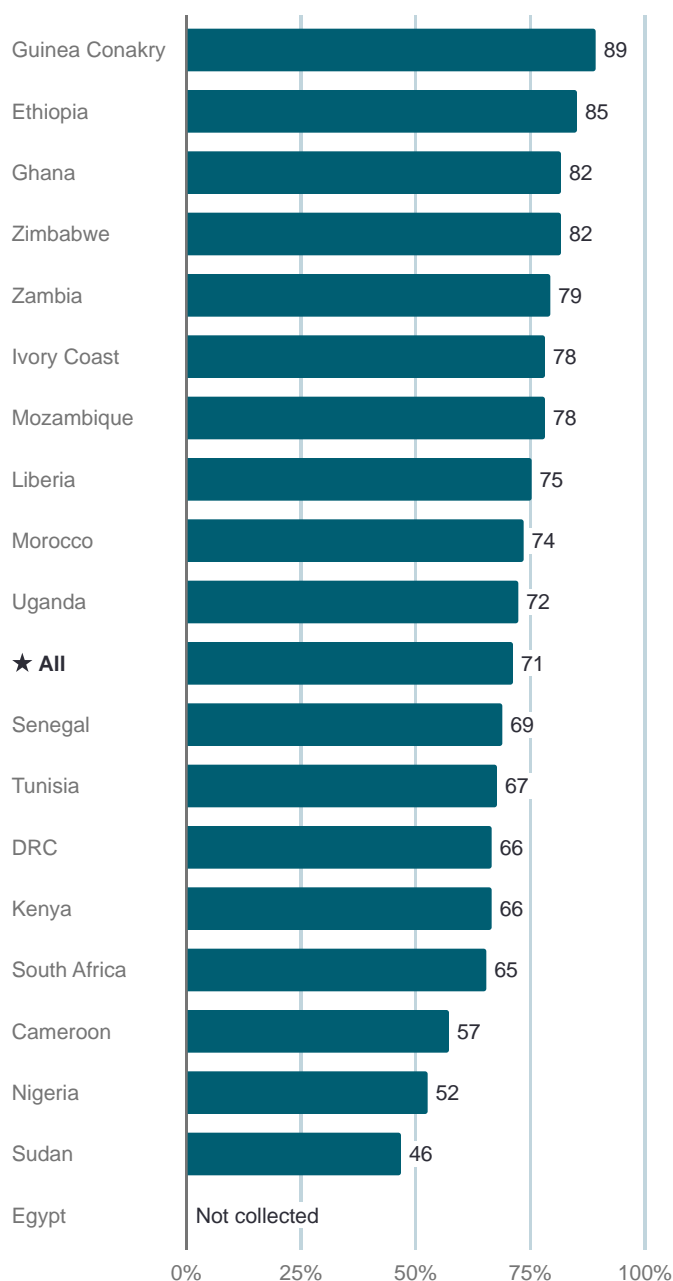
Communicating accurate information is essential for engaging the public during a health crisis, particularly to align risk perceptions with a community’s epidemiology and improve trust in institutions. As such, global and local public health leaders should leverage credible and trusted health sources to disseminate accurate information through trusted and popular channels to promote vaccine uptake and PHSM adherence.

Instilling Trust in Key Public Health Institutions

Satisfaction in the government’s pandemic response remained consistently high across each survey round, with almost three in four respondents expressing a great deal or fair amount of trust since August 2020 (71%-74%).

Among all surveyed Member States, the five institutions most trusted by respondents for their handling of the pandemic were all health-related. This included hospitals/health centers (81%), WHO (78%) and respondents’ Ministry of Health (76%). Almost three quarters of the survey respondents also reported trusting community health workers (72%). As institutional trust was highly associated with respondents’ adherence to public health measures, public health officials should continue leveraging trusted institutions when delivering public health information campaigns.

Percentage of respondents reporting satisfaction with their government’s pandemic response



Most trusted institutions

- 1 Hospitals and health centers 81%
- 2 World Health Organization (WHO) 78%
- 3 Ministry of Health (MoH) 76%
- 4 Medical professional associations 74%
- 5 National public health institute 73%

Data from Sep 2021 PERC Survey

Accessing Accurate Public Health Information

People only know about COVID-19 cases that are reported, and inadequate surveillance systems undermine people’s understanding of the epidemiological context. They can also artificially deflate people’s perception of population-level transmission and the associated risk COVID-19 poses.

For instance, in South Africa, which has recorded the largest number of cases on the continent, 43% of respondents reported believing their personal risk of getting COVID-19 was high. In Sudan, by comparison, surveillance and case reporting have been significantly limited due to conflict, political crisis and factors interfering with overall trust in key people and institutions, alongside a shuttered health system.

Despite [evidence](#) of a [much more severe outbreak](#) much more severe outbreak than what has been reported, only one in four respondents (26%) in Sudan expressed high personal risk perception. Strengthening surveillance systems is absolutely critical, not just for supporting informed perceptions of risk, but more broadly to promote timely and evidence-based response to health threats, to appropriately allocate resources across the health system and to monitor access to essential health services.

In addition to accurate information about the epidemiology, people need accurate information about COVID-19 itself, disseminated by **trusted sources**.

Respondents listed health centers/health care workers as the most trusted sources of COVID-19 information, followed closely by local media sources, including television and radio. Trust in religious leaders and institutions was close to 70% across all surveyed Member States, suggesting a clear strategy for reaching key populations. Social media platforms, such as Twitter, Facebook and WhatsApp, were among the least trusted sources of information among survey respondents (reported as trustworthy by 24%, 28% and 30% of respondents, respectively).

The PERC survey found that local television and radio were the most commonly consulted sources of COVID-19 information across all surveyed Member States. Even though social media platforms are among the least trusted sources of information, they are highly consumed, particularly among younger respondents. Nearly four in 10 (38%) of respondents 18-25 years of age reported using Facebook to get COVID-19 information, underscoring the need for governments to continue targeting outreach to key audiences using demographic information.

Top trusted sources of information

1	Health center/health workers	73%
2	Local television	68%
3	Local radio	65%
4	International television channel	60%
5	Local religious leaders	59%

Data from Sep 2021 PERC Survey

Top sources consulted

1	Local television	65%
2	Local radio	49%
3	Facebook	31%
4	International television channel	25%
5	Friends and family	23%

Data from Sep 2021 PERC Survey

Similarly, the widespread use of Facebook as an information source highlights the importance of engagement platforms known for disseminating misinformation.

Social media platforms can also be used to mitigate misleading narratives and engage directly with constituents. [Ghana](#) and [Zambia](#) are among the Member States that have actively leveraged a broad range of social media platforms to share information that might otherwise be difficult to find on government websites. Rumor-tracking and misinformation management programs can help policymakers get ahead of misinformation before it gains too much traction, and support the dissemination of accurate health information, as has been demonstrated in [Côte d'Ivoire](#).

Health care workers and centers are useful in targeting more vulnerable populations and populations that have greater contact with the health care system, such as people with chronic diseases and pregnant women. Though highly trusted, health care workers were only consulted for information on COVID-19 by about one in five respondents (21%), but this varied by region. More than one in four respondents in the Southern (25%) and Eastern (29%) regions reported consulting health workers/centers for COVID-19 information. However, only one in 10 did so in the Northern (11%) and Central (10%) Regions, likely due to health system disruption and health care worker fatigue.

Key Takeaway

The PERC survey revealed broad trends across the region regarding trusted information sources and channels; governments should consult high-quality data that are specific to their countries, populations and context to inform risk communication strategies. Local data sources should be consulted to help determine how to reach key groups most effectively and motivate them to get vaccinated and adhere to PHSMs. For relevant country-level data, see the [PERC Country Briefs](#) for Member State results.

Access to Essential Health Services

Context

The pandemic has fundamentally disrupted health service delivery in Africa. Public health gains made in recent decades are either stagnating or reversing due to new barriers to accessing care. Health care workers have been on the front lines of the pandemic from the beginning. Many have quit and several thousand have become infected with COVID-19 and died. Despite this, the survey results suggest barriers to accessing needed care may be lifting, particularly as PHSMs loosen, creating an opportunity to regain progress that was lost during the pandemic. Further – because COVID-19 is prevalent in all Member States – there is an opportunity to rebuild health systems in a way that shifts infectious disease threats from an emergency investment to a long-term health priority requiring consistent planning and resource allocation.

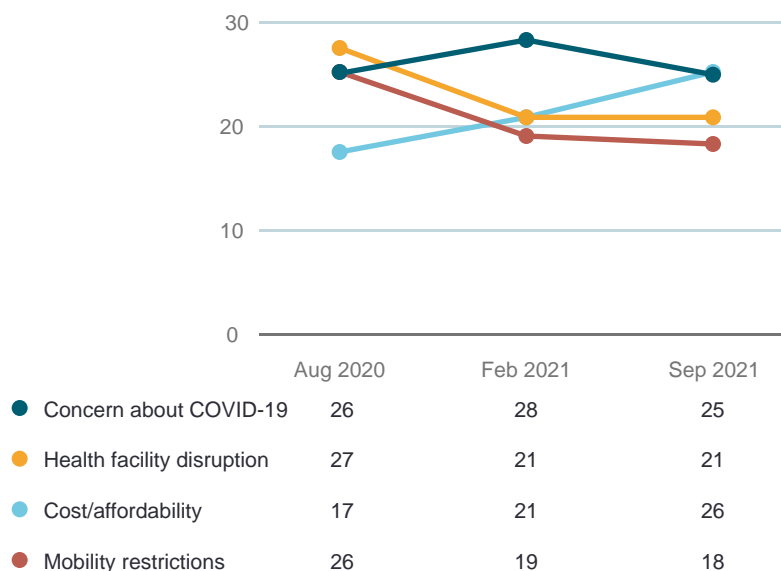
Barriers to Accessing Care

The PERC data show that among respondents who needed care, the share who reported missing or delaying a health visit in the past six months decreased from 44% in August 2020, to 32% in February 2021 and 27% in September 2021. However, the people who need health care the most still face barriers to accessing essential care and medications.

Among the respondents who reported skipping or delaying a needed visit in the previous six months, the share missing a diagnostic- or symptom-related health visit increased from 4% in August 2020 to 26% in September 2021. Within the same time frame, the share of respondents reporting challenges accessing needed medication remained around 45%, showing no signs of improvement from 2020 to 2021.

At the beginning of the pandemic, more than one in four respondents reported that the primary barriers to accessing health care were mobility restrictions (26%) and health facility disruptions (27%). September 2021 survey results show that cost and affordability (26%) have overtaken restrictions (16%) and disruptions (22%). Lockdowns were an almost universal response throughout Africa at the beginning of the pandemic, but PHSMs are now being implemented in a more targeted way, affecting the types of barriers people face in accessing health services. In addition, widespread income loss and unemployment continue to increase and affect access to all essential livelihoods across the continent.

Trend in the percentage of respondents that report a given reason for skipping or delaying health visits



Compared to 2019, by the end of 2020:

 16.6M

children missed their first measles vaccine dose

Source

 22%

decrease in HIV testing

Source

 12%

increase in malaria deaths

Source

Impact of Pandemic-induced Health Delivery Disruptions

Declines in the number of health visits have likely contributed to declines across selected key health indicators since 2019. Among respondents needing health visits, 16% missed a reproductive, maternal, newborn or child health visit; 21% missed a chronic disease visit; and more than one in four reported missing a routine check up in September 2021. As Member States went into lockdown in 2020, mass vaccination campaigns for measles, polio, meningitis and other infectious diseases were interrupted, leaving millions of children at [increased risk](#) of vaccine-preventable diseases. Coverage in the WHO Africa region for the first measles dose fell from 70% in 2019 to 68% in 2020. HIV testing [declined](#) sharply in 2020 due to pandemic lockdowns, HIV clinic closures and limitations on in-person support. However, there are signs of recovery, as [distribution](#) of HIV self-tests and multi-month prescriptions for antiretroviral therapy were scaled up in 2021. Supply chains were also significantly [disrupted](#), delaying shipments of essential medicines.

HEALTH CARE WORKFORCE IN CRISIS

Twenty months into the pandemic, health care workers continue to be at the forefront of the pandemic response, but are woefully under-resourced, overworked and underpaid. Health care workers faced extreme conditions of stress and fatigue, particularly in Member States where other infectious disease outbreaks were occurring in parallel to Delta-driven surges. Doctors and nurses were deployed to address COVID-19 in under-resourced hospitals overflowing with patients, while having to attend to myriad responsibilities. Of all facilities surveyed in a recent Global Fund study across 24 AU Member States, 62% did not have access to the most essential PPE items for their health care workers. Given these conditions, health care worker strikes have emerged in [Guinea-Bissau](#), [South Africa](#), [Nigeria](#), [Liberia](#), [Kenya](#), [DRC](#) and elsewhere to challenge the lack of or delayed pay and poor working conditions.

Health care workers were the top source of trusted COVID-19 information (73%) among all surveyed respondents, making them an obvious choice for supporting vaccine information campaigns and facilitating an equitable vaccine roll out. That said, WHO AFRO reports that even with adequate supply, many health care workers are still vaccine hesitant, [concerned](#) about vaccine safety and adverse side effects, in spite of having an increased risk of COVID-19. In [Nigeria](#), only 300,000 health care workers – or 18% of the health care workforce – have been vaccinated. A recent study in [Ethiopia](#) found that less than half of health care workers intended to get vaccinated. As of November 2021, an estimated 144,000 [health care workers have been infected](#) with COVID-19, with some of those infected dying from complications. While more than 80% of health care workers have been vaccinated in high-income countries, only [one in four are vaccinated](#) against COVID-19 in Africa.

Providing health care workers with accurate and compelling vaccine information and resources, especially in settings where the health workforce is scarce and stretched, can help promote their personal health, ensure patient safety and improve the continuity of essential health services.

Governments and Donors Have an Opportunity to Invest Now

Governments and international organizations — recognizing the risk COVID-19 posed to the provision of primary health care in Africa — strategically invested in programs to improve the resilience of health programs in many Member States throughout the pandemic. This laid the groundwork for response and recovery. Because the share of respondents who reported missing a needed visit decreased from August 2020, there is likely an opening to re-link people to care, make up ground lost during the pandemic and lay the foundation for COVID-19 vaccine delivery and information campaigns, as vaccination campaigns ramp up. COVID-19 is prevalent in all Member States, and as such, resource allocation to essential health services needs to shift away from near-term, emergency investments and instead move toward integrating COVID-19 prevention and care as part of integrated essential health services.

Key Takeaway

PERC data showed that fewer people were missing needed visits over time, but COVID-19 remains a barrier due to health facility disruptions and affordability. Urgent investment in the health care workforce is critical for Member States to stabilize health systems and regain the health progress that has been lost during the pandemic. COVID-19 continues to be prevalent in all Member States. Resources for COVID-19 need to shift from emergency funding to part of the entire health portfolio. Doing so will help promote reliable health service provision, including COVID-19 vaccination as supplies increase, as well as long-term health care worker support and retention.

Income Loss and Food Security

Context

Global food prices have been rising since May 2020, with particularly steep increases over the past year. In October 2021, the United Nations Food and Agriculture Organization (UNFAO) food price index (based on a basket of food commodities) was [up 31% from the previous year](#), driven primarily by the cost of vegetable oils and cereals. There are [many causes for these increased prices](#), including global supply chain shocks, [high fuel and transportation costs](#), rising demand and weather-related supply issues, such as limits to [wheat production in the U.S.](#)

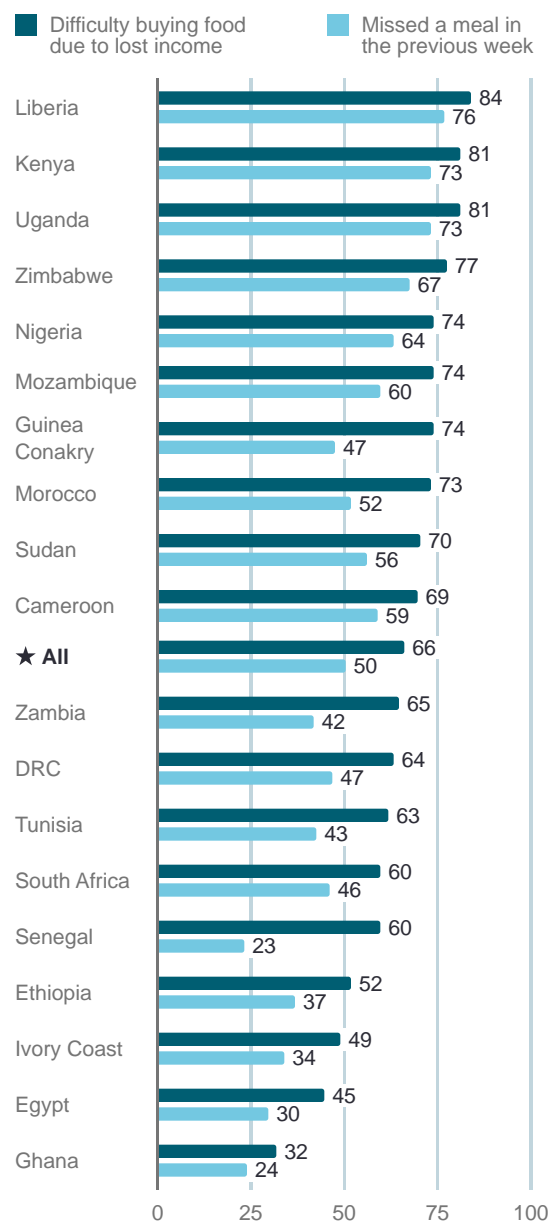
To varying degrees across the African continent, local food prices have been further disrupted by currency depreciation, due in part to political instability in some regions and decreased tourism and remittances in others. In some Member States, local agricultural production has also been affected by conflict, weather shocks (e.g., desert locusts, floods) and movement restrictions, particularly early in the pandemic, which limited both subsistence and commercial agricultural productivity.

In addition to deep implications for the welfare of the population, income loss and food insecurity **limit people's ability to follow public health guidance**. With vaccines, in particular, there are considerable opportunity costs that many are unable to afford, including foregone wages and time to access a vaccination site and recover from side effects.

As PERC reported in its previous surveys (see [August 2020](#) and [February 2021](#) reports), the pandemic has drastically reduced respondents' access to food and income, a trend that continued through the most recent survey. Affordability was also cited as the most common reason for skipping health care, underscoring the role that income loss is playing in Africans' ability to access health care.

As Member States continue to expand vaccination campaigns, it is vital for governments and global funders to address these constraints by bringing vaccines directly to people where they live and work, and mitigating burdens through more comprehensive social safety nets.

Percentage of respondents reporting food insecurity



High Food Prices and Lower Incomes

In the most recent PERC survey, seven in 10 respondents (71%) reported that they were unable to buy the amount of food they would usually buy because the cost was too high. This is seven percentage points higher than what was reported in February 2021. Estimates were even higher in a number of countries facing local food supply issues, including Liberia (86%), Kenya (84%), Sudan (81%), Guinea (81%), Uganda (80%) and Nigeria (80%). More than half of the respondents in each Member State – with the exception of Ghana (35%) and Egypt (46%) – reported high prices as a barrier to food access.

Additionally, more than three in four respondents (77%) reported losing at least some income since the start of the pandemic, ranging from nearly nine in 10 in Kenya (90%), Uganda (88%), Zimbabwe (87%) and Morocco (85%); to two in three in Côte d'Ivoire (67%), South Africa (66%), Mozambique (65%), Ethiopia (65%) and Nigeria (64%). In no Member State did fewer than 64% of respondents report losing income. Furthermore, one in seven respondents (15%) reported losing all of their income since the start of the pandemic, including one in five (21%) lower-income respondents.

Taken together, rising food prices and lower wages are creating high barriers to food access. Half of all respondents (50%) reported that in the past week, they had to reduce the number or portion size of meals they would normally eat. Meanwhile, two-thirds of respondents (66%) who lost all their income since the start of the pandemic reported having to miss or reduce meals, which was true for less than one-third (29%) of those reporting no lost income. The trend was similar, but less pronounced, by income level. More than half (55%) of lower-income respondents reported missing meals, compared to under half (45%) of those from higher-income brackets.

Income is dropping.

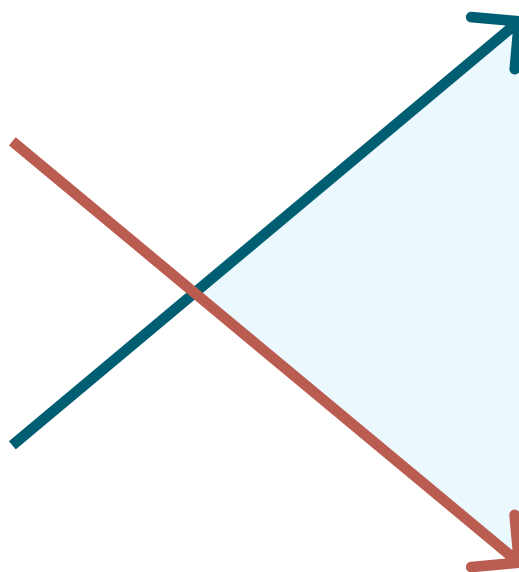
77% of PERC survey respondents report losing some or all of their income since the start of the pandemic.

PERC Survey, September 2021

Food prices are rising.

Since the start of the pandemic, global food prices have increased considerably, including 31% in the past year alone.

Food and Agriculture Organization



Food is less affordable.

PERC respondents said that they were unable to buy the amount of food they usually buy due to income loss (66%) or high prices (71%).

PERC Survey, September 2021

Social Protection Programs

While food prices have risen globally, social spending in high-income countries (HICs) has helped buffer higher costs and lost income. Unfortunately, the same cannot be said for people living in low-income countries (LICs). [Since the start of the pandemic, HICs have spent \\$847 per capita on social protection. In LICs, by comparison, that figure is only \\$4.](#) In Africa, per capita social spending has been only \$28, compared to \$4,253 in North America. Accordingly, only 10% of the survey respondents reported receiving any government support in the past month beyond what they typically receive – a figure that has remained constant through each PERC survey round since August 2020. Only 4% reported receiving cash or food, with fewer still reporting support in the form of a utility subsidy, personal protective equipment or other means. However, there was some variability. About one in five respondents from Uganda (22%), South Africa (20%), Ghana (18%) and Senegal (17%) reported receiving government support, while 5% or less received support in DRC (5%), Kenya (4%), Morocco (3%) and Guinea (1%).

Limited revenue and [high debt obligations](#) have stymied many governments' abilities to provide more generous social protection programs. According to the World Bank, the [debt burden of LICs rose 12% in 2020](#) to a record \$860 billion. The international community must step in to support LICs in their path out of debt vulnerability. Furthermore, International Monetary Fund Special Drawing Rights could be channeled directly to LMICs to support health needs and enable more robust recoveries. The World Bank is supporting some programs, such as Sudan's '[Sumarat Family](#)' cash transfer program, which couples economic reforms with social protection financing, but greater support is needed.

Key Takeaway

Taken together, less income, higher food prices and limited government support have led to direct suffering and stand to create higher opportunity costs for individuals to adhere to PHSMs and get a vaccine. As with essential health services, there is an urgent need for increased global investments in both social protection policies and debt relief efforts. These actions can enable governments to direct more of their own revenue toward domestic priorities and improve their constituents' ability to follow public health guidance.

Conclusion

The COVID-19 pandemic will continue for the foreseeable future, and could become a virus that we encounter for decades. This fourth and final installment of PERC provides real-time data that decision-makers can use to develop mitigation strategies in AU Member States, including:

- Individual PHSMs, such as wearing face masks and social distancing, remain the measures with the lowest cost but highest impact, and should be continually promoted by trusted institutions through accurate, reliable and trusted means of communication. Other, more restrictive measures should be targeted to specific, high-risk populations in order to mitigate their secondary impacts on access to livelihoods, income and essential health services.
- Vaccine hesitancy is not a top concern on the African continent. The majority of survey respondents said they had gotten, or planned to get, a COVID-19 vaccine. Acceptance rates were influenced by trust in key people and institutions and their handling of the pandemic; the perceived risk of COVID-19 to oneself and one's country; age; trust in the vaccines; and the availability of information on vaccines and COVID-19.
- While the PERC survey revealed broad trends across the region about trusted information sources and channels for information dissemination, most survey respondents reported getting COVID-19 information from local health centers, television and radio.
- COVID-19 continues to have a detrimental effect on access to essential health services. Between 2019 and 2020, pediatric vaccinations and HIV testing have decreased and malaria deaths increased. The survey shows health facility disruption, cost and affordability are the primary barriers to care.
- Income loss and food insecurity remain a widespread problem. More than 70% of respondents were unable to buy the amount of food they would usually buy because the price was too high. More than three in four respondents reported losing at least some income since the start of the pandemic.

Based upon these findings, PERC authors recommend:

- The global community should support AU Member States in supplying vaccines at a better coordinated and more systematic pace to allow broader, more effective and equitable distribution. **Resources and expertise to support vaccine delivery must be part of the supply machinery to ensure coverage.**
- Public health and social measures (PHSMs) are critical tools for mitigating COVID-19 transmission, particularly as new, possibly more transmissible, variants emerge in under-vaccinated populations. **Promoting public adherence to PHSMs must remain a top priority.**
- All Ministries of Health in AU Member States have competing priorities – maintaining longer-term investments in endemic diseases, such as HIV and TB, and preparing for and responding to immediate epidemics, such as yellow fever, Ebola and measles. **Investments in preparing health security systems**, such as surveillance, laboratory testing and human resources in health, can be leveraged both for COVID-19-specific responses and other priorities.
- Strengthening health data systems to be better prepared for health threats is critical. It is important that investments prioritize epidemiological data, as well as contextual data and data on community perceptions and actions toward countermeasures for disease mitigation and prevention. Together with the data itself, **timely collection, analysis and dissemination are integral to systems strengthening and emergency response.**

The PERC report has demonstrated that taking a multidisciplinary, holistic approach to data collection, analysis and decision-making allows policymakers to better mitigate COVID-19, as well as the secondary impacts that response operations can impose on communities. Continuing to use real-time data to make decisions can improve the response to COVID-19 as well as future health threats.