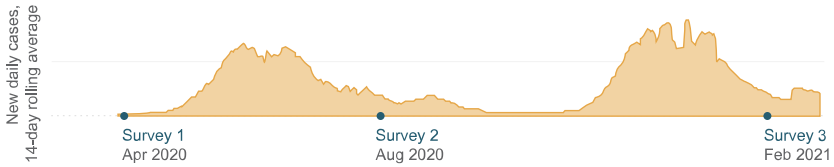
Finding the Balance: Public Health and Social Measures in Sudan

What is the purpose of this report?

This report describes findings from a telephone survey with 1,380 people conducted in February 2021. The survey examined how people respond to public health and social measures (PHSMs) to prevent COVID-19. The sample is representative of households with access to a landline or cell phone, but does not include people without access to phones. As phone penetration varies by country, findings should be interpreted with caution.

Survey data are analyzed alongside epidemiological, mobility, and media data. Triangulating these data sources offers valuable context to better understand the acceptability, impact and effectiveness of PHSMs.

This is the third survey and analysis conducted since the pandemic began (see the first and second reports).



National COVID-19 Data Snapshot on 26 February 2021

Total reported cases	30,316
Cumulative incidence rate per 100,000 people	71
Test positivity rate Proportion of people who test postive for COVID-19 among all people who took a test, averaged over 7 days	Last reported 19 Feb 2021
Total confirmed COVID-19 deaths	1,878
Case fatality ratio Proportion of total reported deaths among all people reported as testing positive for COVID-19	6.2%

What are the highlights from this report?

Disease Dynamics and PHSM Implementation

Against a backdrop of ongoing political, economic and health crises, a second wave of new COVID-19 cases surged in Sudan between November 2020 and February 2021. New reported cases per day peaked in late December at 332. Testing capacity has been a challenge and testing reporting has been sporadic, making it difficult to determine the scale of the outbreak. No major new PHSMs were put in place during the second wave of infections beyond temporary international travel restrictions.

PHSM Support and Self-Reported Adherence

Support for PHSMs targeting individual behavior was high in Sudan (90%), and has increased by six percentage points since August. Support for measures that restrict social gatherings or movement, however, was much lower (62% and 72% respectively). Self-reported adherence to all measures was considerably lower than support, likely a reflection of the limited PHSMs in place.

Risk Perceptions and Information

Respondents in Sudan reported the lowest levels of satisfaction in the government's response to the pandemic among all African Union (AU) Member States surveyed. Perceptions of the risk that COVID-19 poses for the country were high; they were much lower at the individual level, with about one in four (24%) expressing high levels of personal concern.

Secondary Burdens

The myriad health, economic and security crises facing respondents in Sudan were evident. Of all those surveyed in the AU, respondents in Sudan were most likely to report difficulties accessing medicine (80%) and health services; 61% of those needing care reporting missing or delaying a health care visit in the previous six months. Respondents also reported high levels of income loss (74%) and numerous barriers to food access.

Disease Dynamics and PHSM Implementation

What is the relationship between PHSMs and cases reported?

The political and social context influences how well PHSMs are implemented and adhered to, which affects COVID-19 disease transmission and mitigation.

Situational Awareness

Sudan experienced a second wave of new reported COVID-19 cases between early November 2020 and February 2021. New cases peaked in late December at 332 per day and have since returned to pre-wave levels. The precise timing and scale of the epidemic are hard to determine, however, given testing capacity constraints and sporadic reporting of testing data. Africa Centres for Disease Control and Prevention received testing data from Sudan only three times between 1 January and 14 March 2021.

While total confirmed COVID-19 deaths are low in Sudan (1,878), a recent report from the Imperial College of London estimated that only 2% of total COVID-19 deaths have been counted in Khartoum. Along with the high case-fatality rate (6.2%) reported, this suggests that the many cases and deaths are going uncounted and the overall impact is likely more serious than has been officially documented.

PHSMs in Sudan have been limited since October 2020, when mosques and places of worship were reopened. Other than a temporary ban on international flights from three countries with known outbreaks of SARS-CoV-2 variants of concern, there were no major new PHSMs put in place during the second wave of new infections. The lack of new restrictions may reflect the numerous other challenges the Sudanese government must prioritize, including economic, public health and political crises.

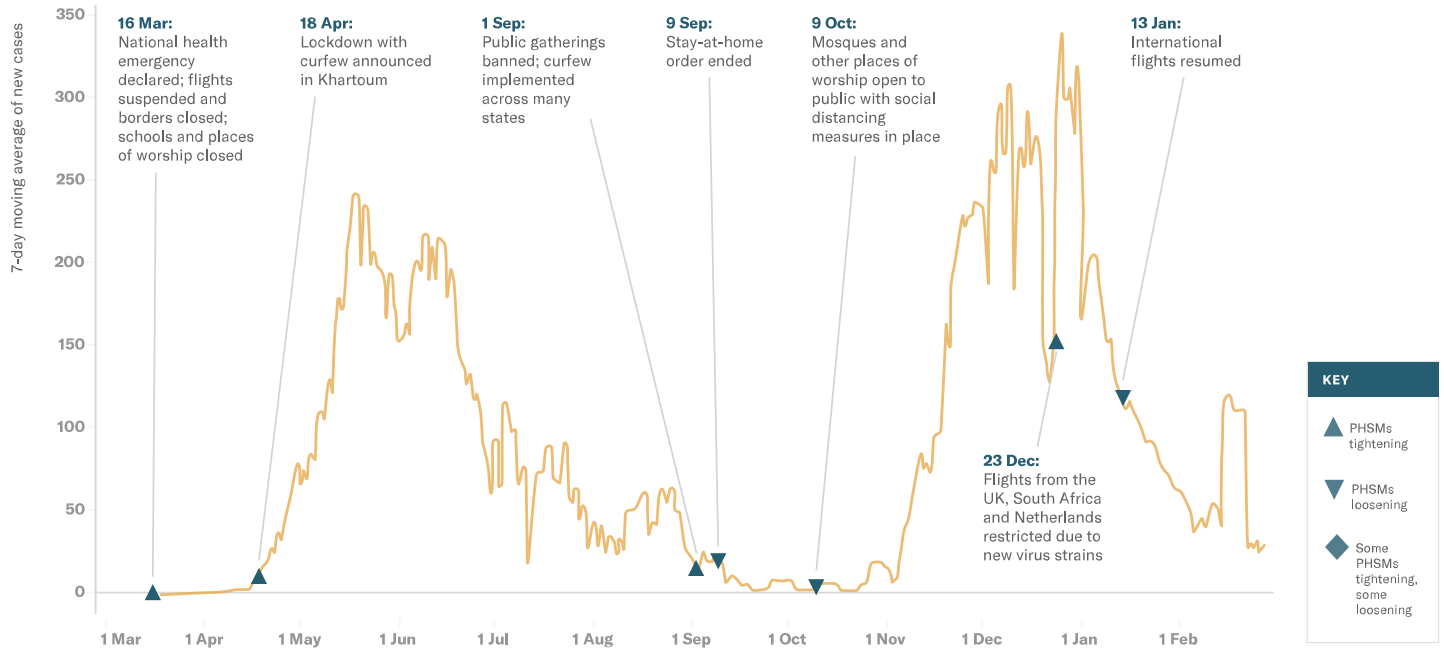
Sudan's health system was already under significant pressure before the COVID-19 pandemic began and has faced a confluence of challenges over the past year, including medication shortages (due in part to COVID-19 supply-chain disruptions), malaria (which reached epidemic levels in 11 out of 18 states in October) and cholera outbreaks, among others. In September, Sudan sustained its worst floods in decades, affecting more than 800,000 people, increasing the risk of waterborne illnesses and further straining household livelihoods.

More than 61,000 refugees have arrived in eastern Sudan since the beginning of the conflict in the Tigray region of Ethiopia. Most are living in refugee camps or host communities in Kassala and Gedaref states, and there have been reports of COVID-19 outbreaks within these settlements.

Sudan is also facing a severe economic crisis. In October, inflation reached 230 percent, driving up prices for commodities and medicines, running down the country's reserves of foreign exchange and forcing the government into a state of economic emergency.

Finally, Sudan's political situation has remained fragile since the military ousted autocratic President Omar al-Bashir in April 2019. On 12 February, 2021—the same day fieldwork began for this survey—a transitional government was sworn in amidst political and economic protests. The new cabinet included three former leaders of armed groups intended to guide Sudan's transition to democratic elections in 2022.

A second wave of new infections began in November 2020 and has since come down despite few major new PHSMs enacted in that time.



PHSM Support and Self-Reported Adherence

Do people support and follow measures?

PHSM effectiveness relies on widespread acceptance and behavior change.

What the data say

Respondents from Sudan reported high levels of support for individual preventive measures. Support was higher than in the August 2020 survey, which may be the result of the recent second wave of new infections. By contrast, support for measures restricting social gatherings and movement was lower than in August, by eight and 12 percentage points, respectively.

- Self-reported adherence to all measures was considerably lower than support, likely representing the low levels of PHSMs in place during the survey period.
- For all categories of measures, women were more likely to report adherence and tended to express higher rates of support. The difference was greatest for measures restricting social gatherings; significantly more women than men reported support (66% vs 57%) and adherence (49% vs 28%).

In the media

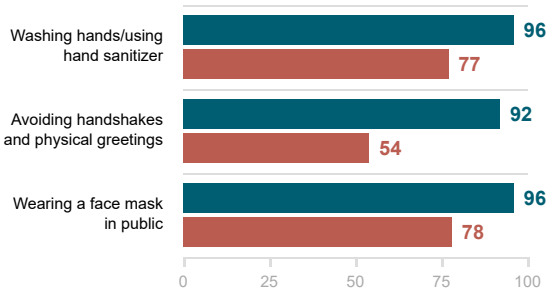
Due to shortages, people have taken to social media to request personal protective equipment for their communities. “There is a school, it needs a 50 3/4 inch hose to clean and sterilize the school, as well as masks and sterilization tools... May Allah reward you.”

—Facebook user, 23 December 2020

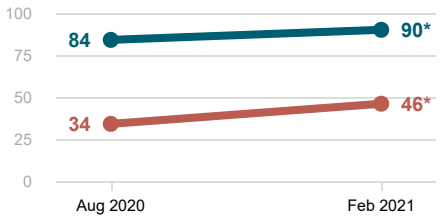
Individual measures

Despite high levels of support for all individual measures, only around half of respondents (54%) reported avoiding handshakes and physical greetings, which are important social customs in Sudanese culture.

*Percent that **support** and **adhere** to each individual measure in Feb 2021*



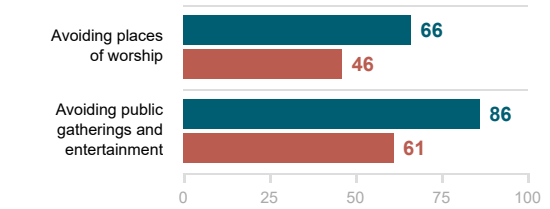
*Trend in percent that **support** and **adhere** to all individual measures (composite score)*



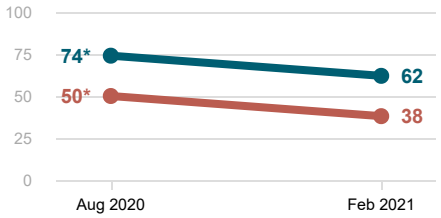
Measures restricting social gatherings

Support for and self-reported adherence to measures restricting religious gatherings were low in Sudan, a highly religious country. Support for measures restricting public gatherings and entertainment was higher.

*Percent that **support** and **adhere** to each social measure in Feb 2021*



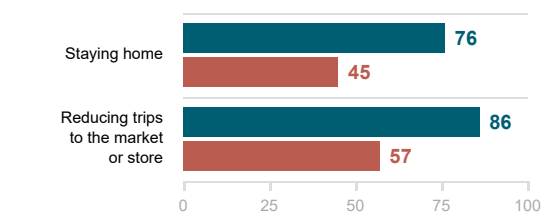
*Trend in percent that **support** and **adhere** to all social measures (composite score)*



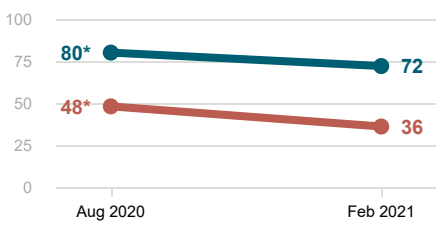
Measures restricting movement

Although support for and self-reported adherence to measures restricting movement were significantly lower than in August, more than seven in 10 still expressed support for staying home and reducing market trips.

*Percent that **support** and **adhere** to each movement measure in Feb 2021*



*Trend in percent that **support** and **adhere** to all movement measures (composite score)*



PHSM Support and Self-Reported Adherence

Whom do people trust?

Public trust in government and institutions is a key driver of support for and adherence to PHSMs.

What the data say

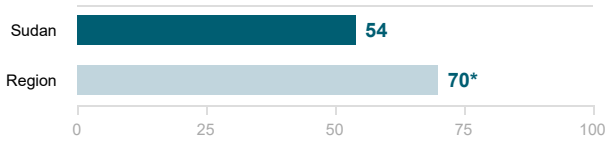
Respondents in Sudan reported the lowest levels of satisfaction in the government's pandemic response of all AU Member States surveyed, a drop of 12 percentage points since August. These findings reflect ongoing political turmoil amidst the recent appointment of a new transitional government (and power sharing agreement) and protests against soaring food prices.

- Respondents from lower-income households were more likely to report satisfaction in the government's response (63%) than higher-income households (51%), and were similarly more likely to report trust in other government institutions, such as the Ministry of Health.
- Trust was higher for international institutions, such as the World Health Organization (WHO) (89%) and UNICEF (89%), both of which have a large presence in Sudan, than for domestic institutions, including the Ministry of Health (69%).
- Dissatisfaction with the government's response was associated with lower rates of support for and self-reported adherence to all types of PHSMs.

What do people think about their country's institutions?

Satisfaction with the government's response to the COVID-19 pandemic was the lowest in the East Africa Region and among all Member States surveyed.

54% are satisfied with the government's pandemic response



Top five most trusted institutions and individuals

Percent of people reporting trust in each source

World Health Organization (WHO)	89%
UNICEF	89%
Your own family doctor	74%
Africa Center for Disease Control (Africa CDC)	74%
Religious institutions	73%

What are people saying in the news and on social media?

Coverage of economic concerns dominated traditional and social media in Sudan, while coverage of COVID-19 decreased steadily since April 2020. Criticism of the government on social media was largely driven by concerns related to the increasing cost of food and gasoline, while there was considerable traditional media coverage of unrest in the border areas of Ethiopia and a resurgence of conflict in Darfur.

The Ministry of Health, which received blame for the economic impact of PHSMs put in place early in the pandemic, was a continued target of attention on social media, particularly after it came out against a strike among medical doctors who were protesting violence they had faced.

In accordance with survey findings, traditional and social media coverage of international organizations was largely positive. The United Nations, UNHCR, and the World Health Organization were widely referenced for their humanitarian efforts in the country.

In the media

"Sudan is struggling with a steady rise in COVID 19 cases and fatalities especially in the capital Khartoum. In recent days several senior officials, doctors and bankers lost their lives. Poor health facilities, limited testing and a denial attitude are major challenges!"

—Twitter user, 25 November 2020

Risk Perceptions and Information

How do people understand risk?

Perceptions of risk are influenced by the epidemiology of an outbreak as well as the type and quality of information disseminated by trusted sources.

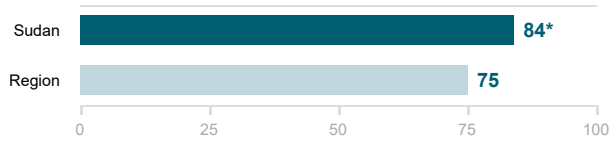
What the data say

Respondents from Sudan reported high levels of concern (84%) about the risk COVID-19 posed to their country; however, fewer than one in four (24%) believed they were at a high personal risk of contracting COVID-19. Compared to other countries in the Eastern region, a lower share of respondents from Sudan believed their health would be seriously affected if they were to become infected with COVID-19.

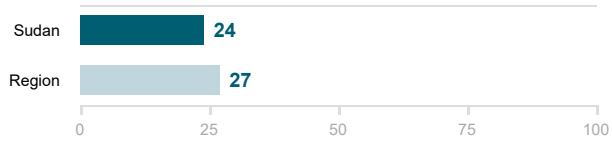
- Respondents' risk perceptions are likely influenced by their own experience with COVID-19, which may explain the disconnect between the high level of concern for their country and low level of concern on the individual level. Nearly four in 10 (39%) reported knowing someone who has tested positive—the highest among Member States in the region—while only 9% of respondents believed they or a member of their household had been infected with COVID-19.
- More than eight in 10 respondents believed that health care workers should be avoided because they may transmit COVID-19—the most in any Member State surveyed. Almost nine in ten (87%) of those who reported skipping or delaying a health service visit since the start of the pandemic expressed stigma toward health care workers. Stigma around recovered COVID-19 patients was also high at nearly two in three (64%).
- Violent episodes in North Darfur further highlight stigma concerns. Doctors have been targeted, ostensibly due to priority access to petrol and other services they receive. One such attack led to a strike among doctors to raise awareness of the situation.
- Understanding of asymptomatic transmission and carriage was high at about nine in 10 for both. Belief in herbal remedies was also high at 59%.

How do people understand the risk of COVID-19?

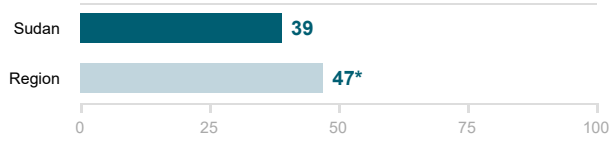
84% believe that COVID-19 will affect many people in their country



24% believe that their personal risk of being infected with COVID-19 is high



39% believe that their health would be seriously affected by COVID-19



Do people stigmatize others?

85% think they should avoid health care workers because they could get COVID-19 from them

64% think they should avoid people who have had COVID-19 in the past because they remain infectious

Do people believe accurate information?

90% understand that infected people may never show symptoms but could still infect others

88% understand that infected people may not show symptoms for five to 14 days

59% believe that COVID-19 can be cured with herbal remedies

Risk Perceptions and Information

How are perceptions of risk informing actions?

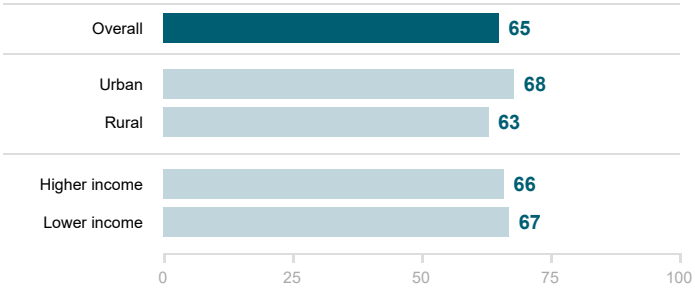
How people understand risk influences key behaviors and decisions that could mitigate disease transmission, including adherence to PHSMs and vaccine uptake.

How do people feel about resuming day-to-day activities?

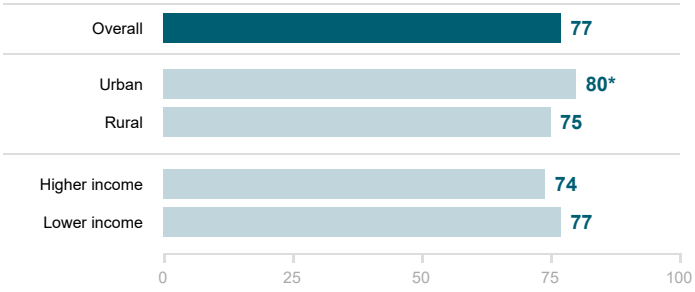
More than three in four respondents (77%) reported that they have resumed normal activities, among the highest rates of all Member States surveyed. However, anxiety around these activities (65%) and comfort in taking public transportation (43%) were roughly average for the AU. Taken together, these data suggest that COVID-19 concerns are being outweighed by necessity.

- Respondents in urban settings were more likely to report resuming activities; no other significant demographic differences identified.
- Those satisfied with the government's pandemic response were 14% more likely to express anxiety about returning to normal activities, but were also more likely to report resuming those activities.

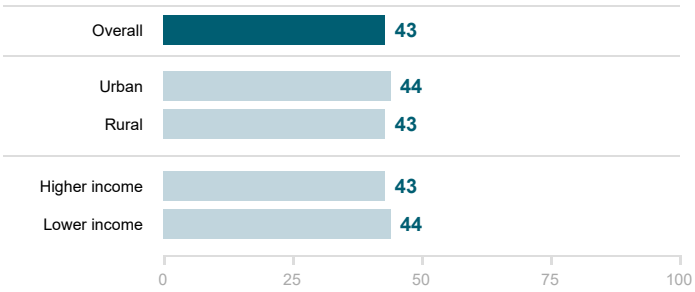
65% feel anxious about resuming normal activities



77% have already resumed normal activities because they believe COVID-19 risk is low



43% feel comfortable taking public transportation

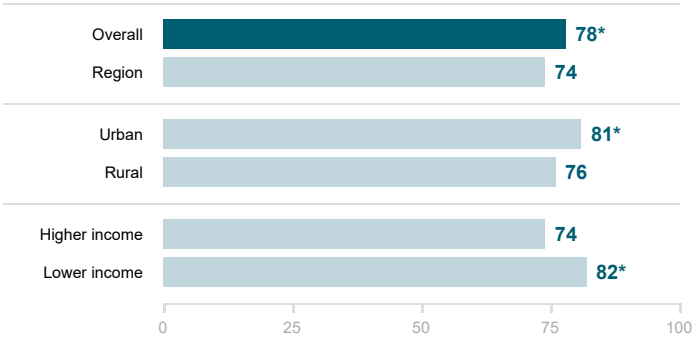


What do people think about vaccines?

A large majority of respondents from Sudan (78%) reported planning to get a vaccine when one becomes available. On 3 March, Sudan received its first delivery of 828,000 doses of AstraZeneca vaccine from the COVAX facility.

- Urban and lower-income respondents reported greater interest in vaccination compared to rural and higher-income respondents. Younger respondents were also more likely to express interest, but the sample size of respondents over 56 was too small to draw a comparison.
- No single reason for vaccine hesitancy predominated (or received more than 20% of the total share of responses). The top reason cited was lack of information (16%), suggesting that a concerted community engagement effort could improve future vaccine uptake.

78% plan to get a vaccine when available



Top reasons people would not get the vaccine

Among people who said they would not get the vaccine, their reasons were:

I do not yet know enough about the vaccine to make a decision	16%
I do not feel I am at risk of catching the virus	14%
I do not trust vaccines/health authorities	13%

In the media

"By God, the best thing you did. The vaccination is very important against Corona and we are all in the line waiting for our turn to be vaccinated."

—Facebook user, 15 March 2021

Secondary Burdens

Are people skipping or delaying health care?

Mobility restrictions, overburdened health care facilities, and fear of catching COVID-19 can prevent people from seeking essential health care; understanding the barriers to access can help improve linkages to care.

What the data say

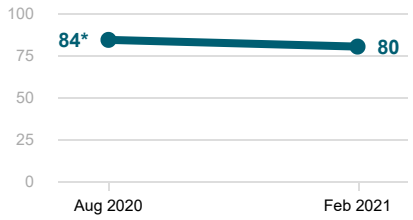
80% of respondents who said that they or someone in their household needed medication reported difficulty obtaining it; more than 60% reported skipping or delaying needed health services. While slightly lower than in August, these were the highest levels reported among all Member States surveyed, highlighting significant gaps in Sudan's health care system.

- An estimated 9.2 million people are in need of health care in Sudan, and access to health facilities has been limited by recent crises. In Khartoum state, nearly half of the health centers have closed since the start of the pandemic; in Darfur, a quarter of facilities were closed in 2018 due to lack of funds and staff. As in August, the most common reason reported for missing services was health facility disruption (e.g., staff shortages or hospitals being closed/too busy).
- Of the respondents that had missed or delayed care, more than 20% reported skipping a visit for malaria treatment. In October 2020, malaria reached epidemic levels in 11 of Sudan's 18 states.

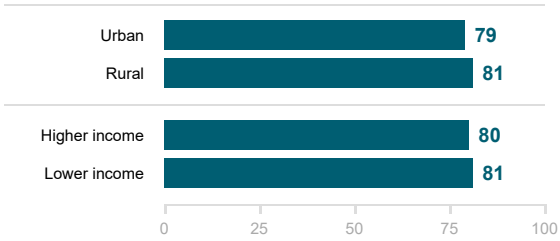
Difficulty getting medicines

Access to medication has remained a significant challenge, affecting nearly 80% of those in need of medicine in the previous three months.

Trend in percent of households having difficulty getting medicines in the past three months



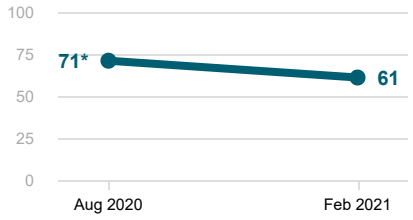
Percent having difficulty getting medicines by category



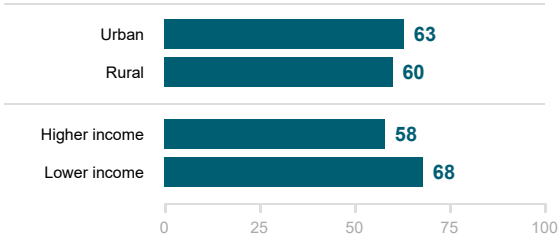
Skipping or delaying health visits

More than six in 10 respondents who needed health care reported skipping or delaying a health visit in the previous six months; while this was a decrease from August, it was still the highest proportion found among all Member States.

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



Percent skipping or delaying health care visits by category



The reasons why visits were skipped or delayed
People could choose multiple responses

Health facility disruption	36%
Mobility restrictions/transport challenges	29%
Cost/affordability	19%
Worried about catching COVID-19	15%
Caretaker responsibilities	3%

The types of visits which were skipped or delayed
People could choose multiple responses

Diagnostic services/symptoms	33%
General/routine check-up	28%
Non-communicable diseases	25%
Communicable diseases	23%
Reproductive, maternal and child health	9%

Secondary Burdens

Are people experiencing income loss or food insecurity?

Measures restricting economic activities can severely disrupt livelihoods and access to markets; understanding the type and extent of these burdens can help inform policy changes and identify people who need support.

What the data say

The economic and food security challenges facing respondents in Sudan were pervasive. Over half (56%) reported having to skip or reduce the portion size of a meal in the previous week, and nearly three in four (74%) reported lost income since the start of the pandemic.

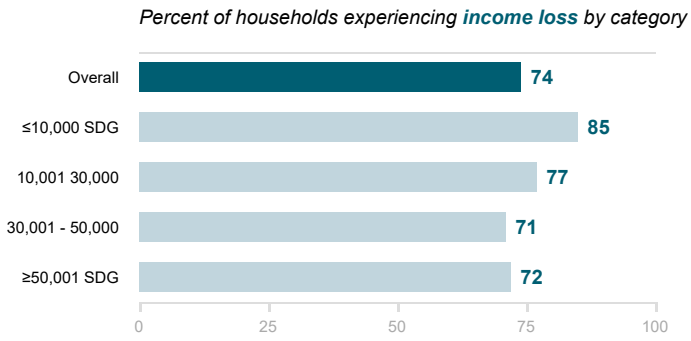
- Sudan's soaring inflation appears to be a likely root cause of economic hardship; 84% of respondents reported higher food prices were a barrier to access and nearly one in five (19%) of those who skipped or delayed a health service cited cost as a reason.
- While widespread, challenges with food access did not affect everyone evenly. Two in three respondents from the lowest income bracket reported having to skip or reduce the portion size of a meal, compared to about half (49%) from the highest income group (itself a notably high share).
- Severe floods in the final quarter of 2020 and the ongoing economic crisis have hurt agricultural productivity and exacerbated food insecurity. An estimated 7.1 million people were severely food insecure in December 2020—a 22% increase from the same period in 2019—while 1.3 million people were facing emergency levels of acute food insecurity.
- In October 2020, the Sudanese government and the World Bank launched a US $400 million Family Support Programme "Samarat" to provide cash transfers and improve social protection systems and safety nets. However, only 5% of survey respondents reported receiving any support from the government, with just 1% receiving food supplements or cash transfers.

Reported barriers to food access

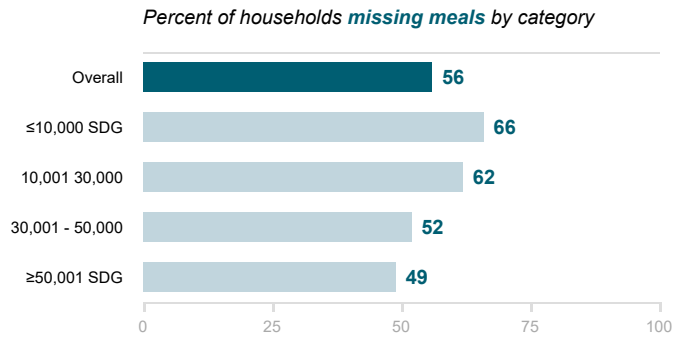
Percent of people reporting each barrier

Less income	75%
Higher food prices	84%
Food markets closed	47%
Mobility restrictions	41%
Food market supply shortages	58%

Household income

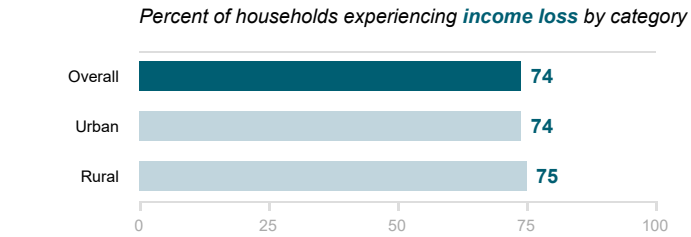


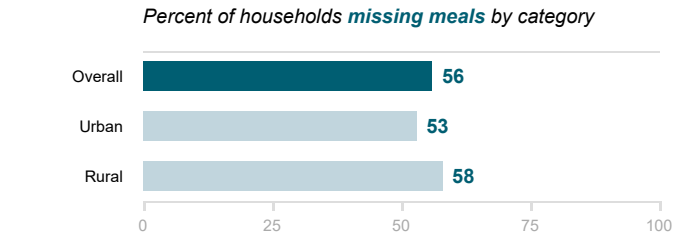
*Household income is significantly associated with income loss.



*Household income is significantly associated with missing meals.

Location





Appendix

Endnotes

Report notes

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).

Two-tailed t-tests to compare two categories, and chi-square tests to compare more than two categories were conducted to assess statistical differences. An asterisk (*) indicates statistical significance where $p < 0.05$.

The figure on page 2 of the report shows the 7-day rolling average of new cases alongside test positivity and mobility data from March 2020 to February 2021. Where test positivity data and/or mobility data are missing, the data are unavailable.

Full survey results are available here and on the PERC online dashboard. *For full details on data sources, methods and limitations, see preventepidemics.org/perc.*

- Ipsos conducted a telephone *survey* of a nationally representative sample of households with access to a landline or cell phone. Results should be interpreted with caution as populations without access to a phone are not represented in the findings. The percentages reported in Ipsos charts may be different from percentages reported in other PERC products and communication of these data. Differences may be reconciled by investigating the denominator and/or weights used.
- Novetta Mission Analytics conducted research to collect insights from *traditional and social media* sources using online, open-source African media, and geolocated African Twitter and Facebook sources. These qualitative data reflect public narratives in online media sources and among social media users. Quotes have been edited where necessary for clarity, with modified text in brackets. Content from social media sources in the public domain should be interpreted with caution given that views reflected might be extreme in nature and are not representative of the population of a given country or demographic.
- Africa Centres for Disease Control and Prevention (Africa CDC) provides *epidemiological* data daily for African Union (AU) Member States. Africa CDC receives case, death and testing data from each AU Member State. Because not all AU Member States report daily, numbers could be delayed, especially for testing data which is more commonly reported late, or in periodic batches (e.g. weekly).
- Other Data is drawn from publicly available sources.

Findings reflect the latest available information from listed sources at the time of analysis, and may not reflect more recent developments or data from other sources. Data vary in completeness, representativeness, and timeliness.

Country notes

The survey sampled from Sudan consisted of 1,380 adults (558 urban, 822 rural), collected between 15 to 23 February 2021.

Income classifications were based on existing data on local income distributions, which were used to create four income bands, defined as:

- Low income: Monthly household income 10,000 SDG and below
- Low middle income: Monthly household income 10,001 SDG - 30,000 SDG
- High middle income: Monthly household income 30,001 SDG - 50,000 SDG
- High income: Monthly household income 50,001 SDG and above