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# Socioeconomic Impacts of COVID-19 in Kenya

March, 2021[1]

- The COVID-19 pandemic has had a strong impact on the livelihoods of Kenyan households, even though employment and income levels are slowly recovering.
- Nevertheless, food security for many households has worsened again in 2021.
- However, access to education and health services continued to improve.
- Misperceptions regarding COVID-19 are prevalent, and compliance with physical distancing measures against COVID-19 has decreased.
- Most Kenyans would be willing to take a COVID-19 vaccine, but many are concerned about potential side effects.

## THE COVID-19 PANDEMIC REACHED KENYA IN MARCH 2020 AND HAS HAD STRONG SOCIOECONOMIC CONSEQUENCES.

Kenya crossed a total of 100,000 recorded cases of COVID-19 on January 25, 2020. Although schools in Kenya reopened on January 4, 2021, in-person schooling was suspended again on March 24, 2021. Alongside the nationwide curfew, restrictions on movement and gatherings were put back in place for parts of the country, with the highest infection rates on March 24, 2021. On March 3, 2021, Kenya received 1 million doses of COVID-19 vaccine of the initial allocation of 3.5 million doses under the global COVAX initiative.[2] Additionally, UNICEF provided 1 million syringes and 10,000 safety boxes to Kenya, thanks to a global stockpile funded and supported by Gavi.[3] The Kenyan economy has shown signs of recovery at the start of 2021. This brief summarizes the key results of the Kenya COVID-19 Rapid Response Phone Survey (RRPS) tracking the socioeconomic impacts of the crisis from May 2020 to March 2021 (Figure 1).[4]

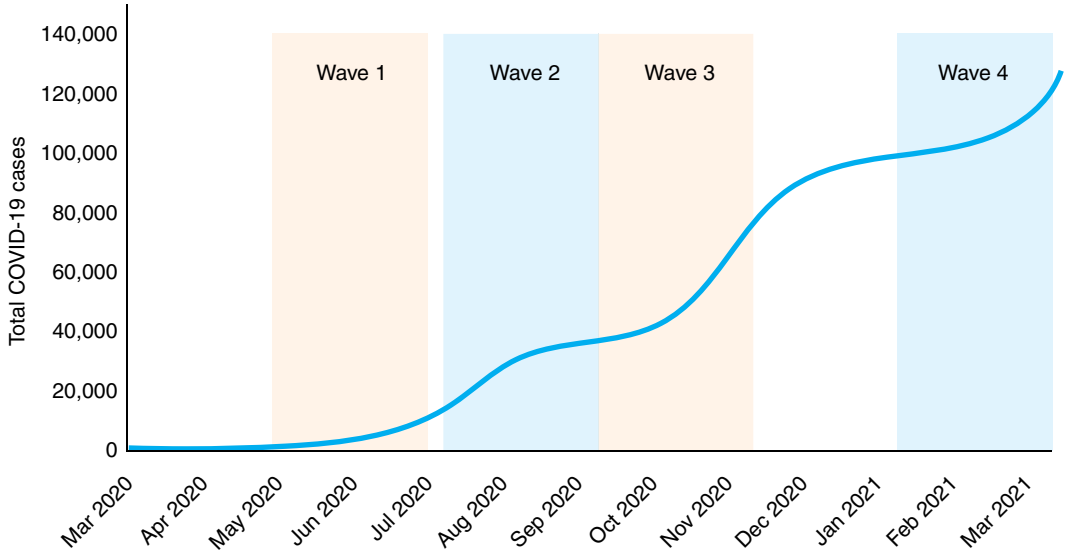
1 Authors: Utz Johann Pape, Antonia Delius, Ritika Khandelwal, Rhea Gupta, and Alastair Haynes.

2 COVAX is led by WHO and CEPI to provide rapid and equitable access of COVID vaccines to low- and middle-income countries. For more details, see here. The vaccine is manufactured by Oxford-AstraZeneca and the Serum Institute of India. For more information on procurement and uptake of vaccines, see here.

3 Details regarding the vaccine rollout plan in Kenya can be found here.

4 The survey was implemented by the World Bank, the Kenya National Bureau of Statistics (KNBS), the United Nations High Commissioner for Refugees (UNHCR), and the University of California, Berkeley. This brief covers the first four rounds of the RRPS. For more details, see here.

**FIGURE 1:** COVID-19 cases and RRPS timeline in Kenya

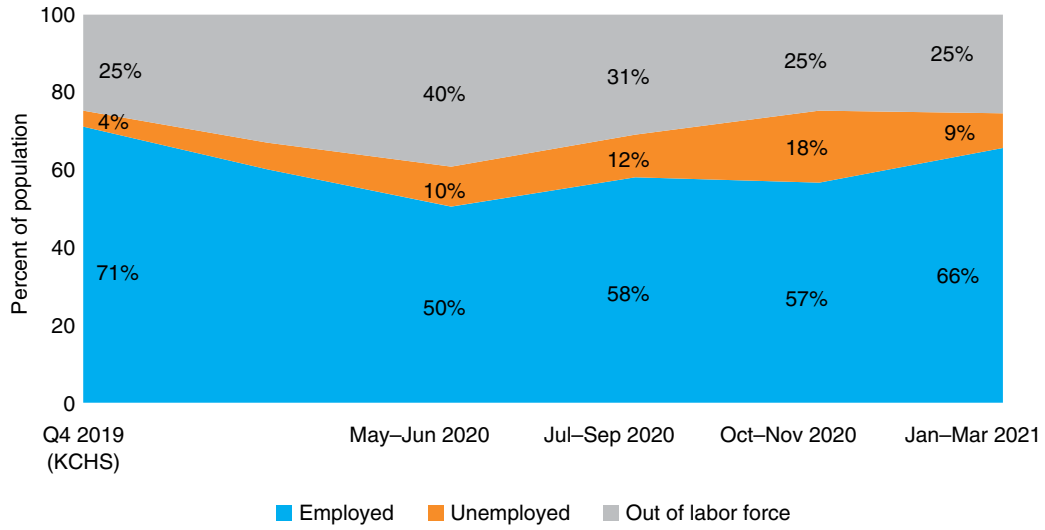



*Source:* Our World in Data.[5]

## EMPLOYMENT HAS SLOWLY RECOVERED IN THE EARLY MONTHS OF 2021. HOWEVER, IT CLEARLY REMAINED BELOW Q4 2019 LEVELS.

The pandemic resulted in huge losses of employment, dropping from 71 percent of the population in Q4 2019 to 50 percent in May–June 2020. However, the situation has improved, with employment increasing to 66 percent in January–March 2021. Unemployment has halved from 18 percent in October–November 2020 to 9 percent in January–March 2021 (Figure 2). Urban unemployment has dropped strongly from 25 percent to 14 percent (Figure 3). Despite the improvement, employment remained 5 percentage points below Q4 2019 levels.[6]

**FIGURE 2:** Labor force statistics (18–64 years)

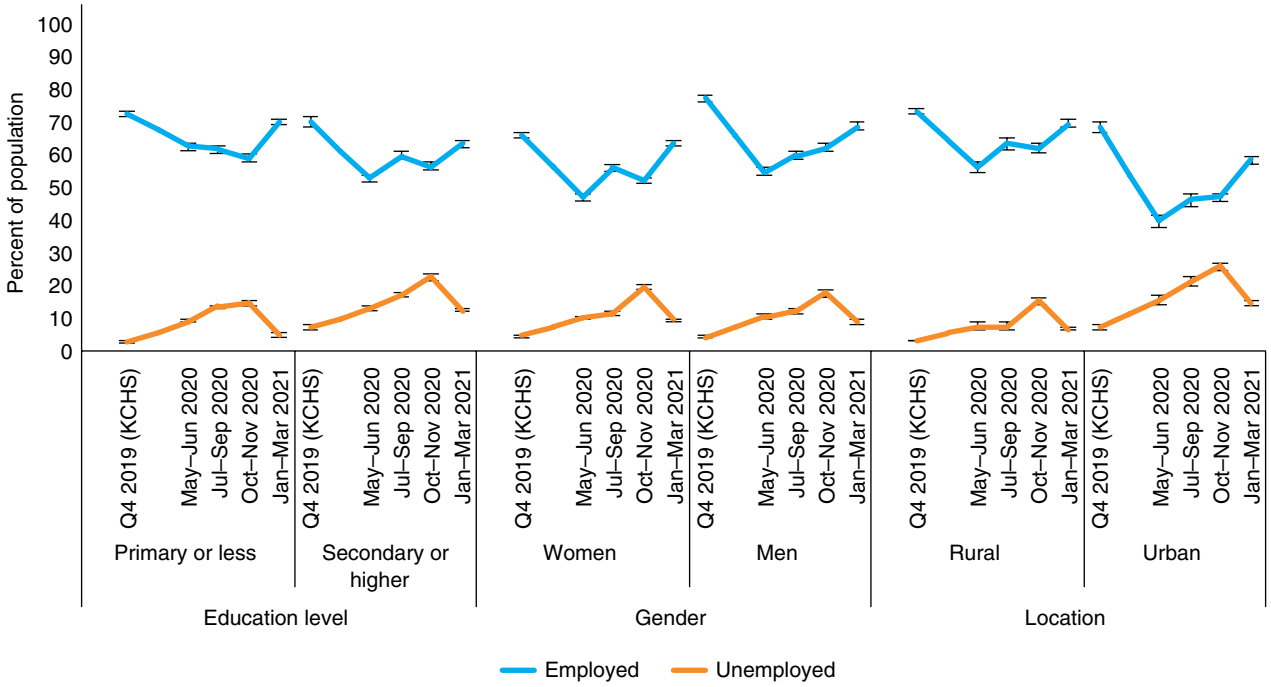



*Source:* Kenya COVID-19 RRPS and 2019 KCHS.

5 Our World in Data. Data downloaded on March 26, 2021, here.

6 While the labor force statistics in the phone survey were designed to be comparable with the quarterly labor indicators released by the KNBS, the mode of data collection (phones instead of face-to-face interviews), as well as the selection of the respondents, can limit comparability. Furthermore, the KNBS does not include refugees in their labor force statistics. The presented statistics based on the KCHS data also differ from the official labor force statistics published by the KNBS, as the latter uses a different age group (15–64).

**FIGURE 3:** Employment (18–64 years)

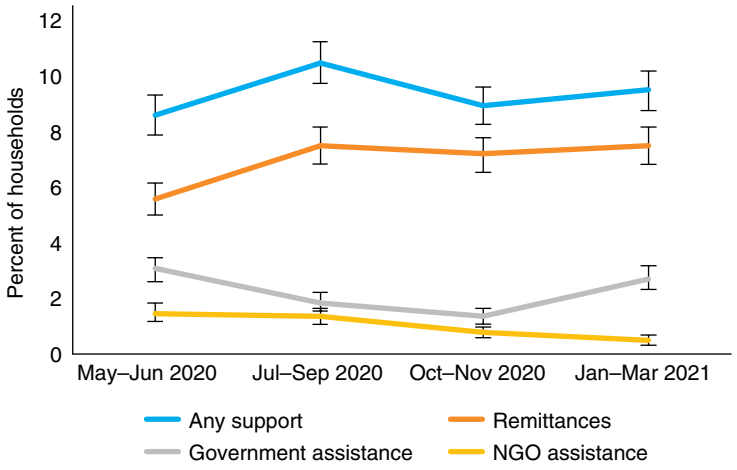



*Source:* Kenya COVID-19 RRPS and 2019 KCHS.

## FEW HOUSEHOLDS HAVE RECEIVED SUPPORT FROM OUTSIDE THE HOUSEHOLD SINCE THE START OF THE PANDEMIC.

Support from outside the household can help the Kenyan population meet their needs during the pandemic. However, only a small share of households received remittances (7 percent) in January–March 2021. The remittance amount was larger for around half of the households that received remittances compared to pre-COVID-19 amounts. However, one-quarter received smaller amounts, which may have consequences for household welfare. Very few households received government (3 percent), or NGO assistance (less than 1 percent; Figure 4).

**FIGURE 4:** Support from outside the household

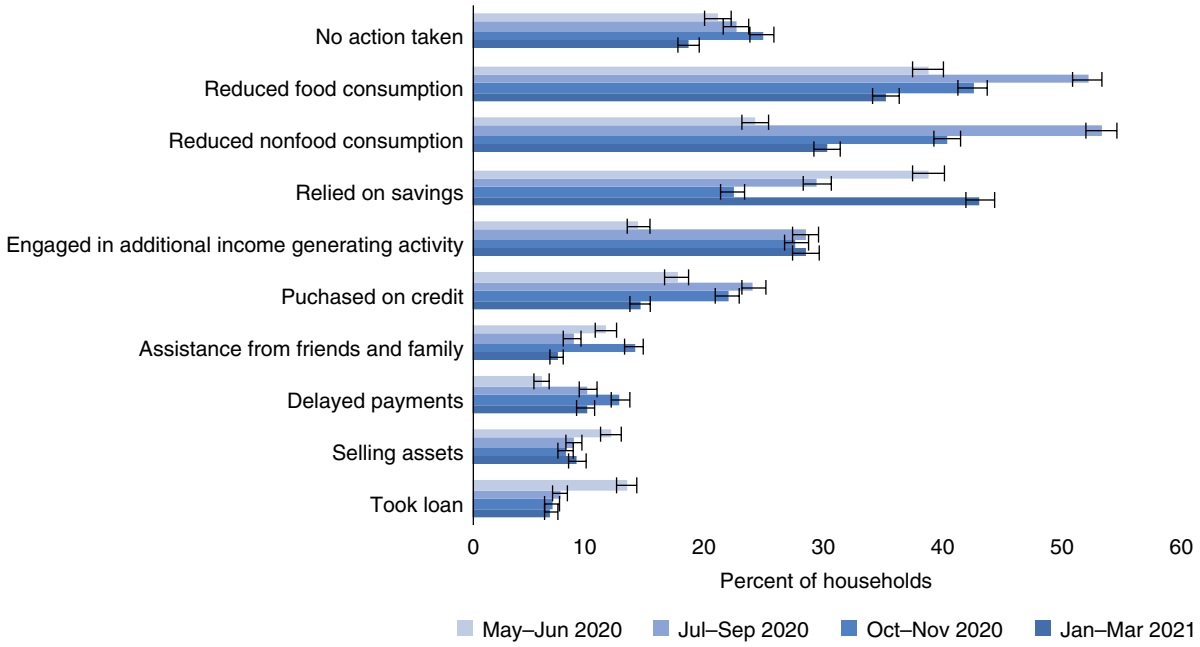



*Source:* Kenya COVID-19 RRPS.

## TO COPE WITH THE IMPACT OF THE PANDEMIC, HOUSEHOLDS ENGAGED IN ADDITIONAL INCOME GENERATING ACTIVITIES.

Households have used various coping strategies to deal with the impact of the pandemic. Households relied on their savings and reduced their food consumption in May–June. As the pandemic continued, the reduction of food and nonfood consumption became more prevalent, with over half of households reducing their nonfood consumption in July–September. An increasing share of households also sought additional income generating activities in July–September, which remained common in the initial months of 2021 (27 and 28 percent of households, respectively). However, relying on savings became the most common coping mechanism in early 2021, likely facilitated by increases in employment (Figure 5). At the same time, fewer households relied on reducing food and nonfood consumption since October–November 2020 (from 41 percent to 34 percent for food consumption). The continued use of coping mechanisms by the vast majority of households into 2021 indicates that households were still coping with the consequences of the pandemic.

**FIGURE 5:** Coping mechanisms (multiple answers possible)



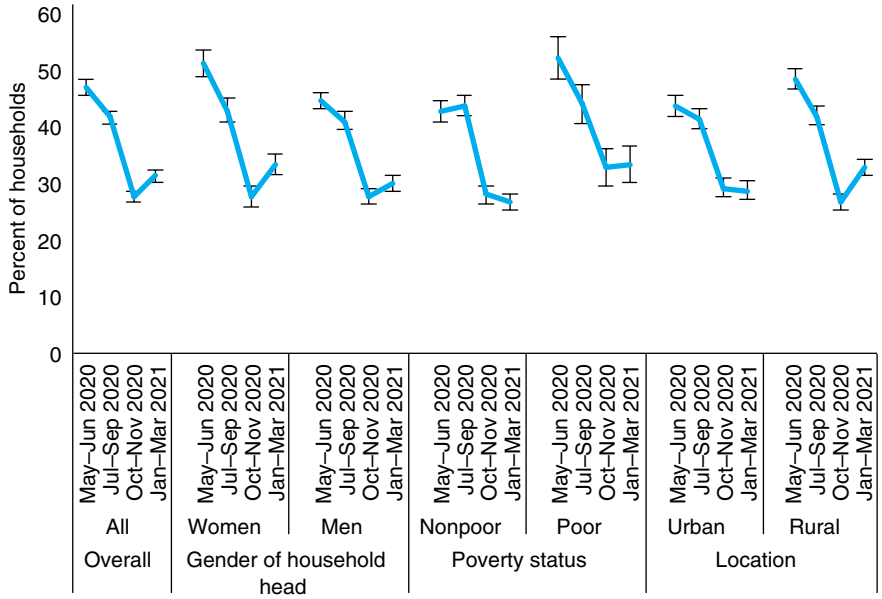

*Source:* Kenya COVID-19 RRPS.

## ONE-THIRD OF KENYAN HOUSEHOLDS STILL DID NOT HAVE ENOUGH FOOD TO EAT IN THE EARLY MONTHS OF 2021.

An adult went hungry in just under 50 percent of households in May–June, which decreased to 28 percent in October–November (Figure 6). Although the situation has improved since the initial months of the pandemic, lack of food is still an issue for just under one-third of households at the start of 2021. Poor and rural households are most affected (each 33 percent). A lack of food can directly impact the ability of adults and children to undertake a normal, healthy, and productive life, thus leading to malnutrition, stunting, and human capital losses.[7]

7 Government of Kenya, "IPC Acute Food Insecurity and Acute Malnutrition Analysis, February 2020–July 2020," see here.

**FIGURE 6:** Went hungry due to lack of food (past 30 days)

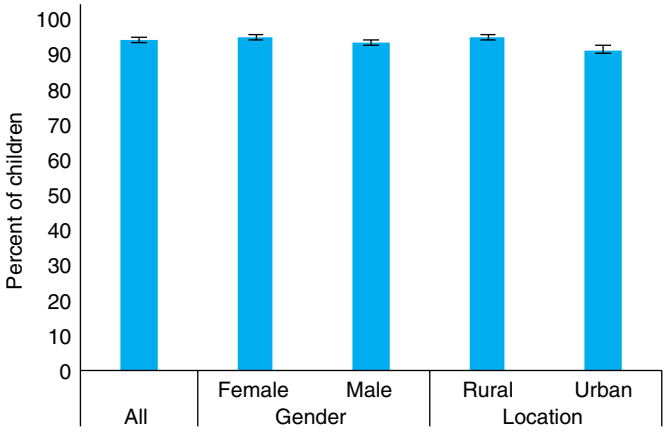



*Source:* Kenya COVID-19 RRPS.

## ALMOST ALL SCHOOL AGE CHILDREN WERE ATTENDING SCHOOLS IN JANUARY–MARCH 2020.

On January 4, 2021, all schools in Kenya reopened for the first time since March 2020. Of school-age children (6 to 17), 94 percent attended school (Figure 7). Rural attendance was higher than urban attendance (95 versus 91 percent), while girls' attendance was greater than boys' (95 versus 93 percent). After months of limited access to education, it is important that students are given sufficient support to catch up on missed learning opportunities.

**FIGURE 7:** School enrollment (ages 6–17, January–March 2021)

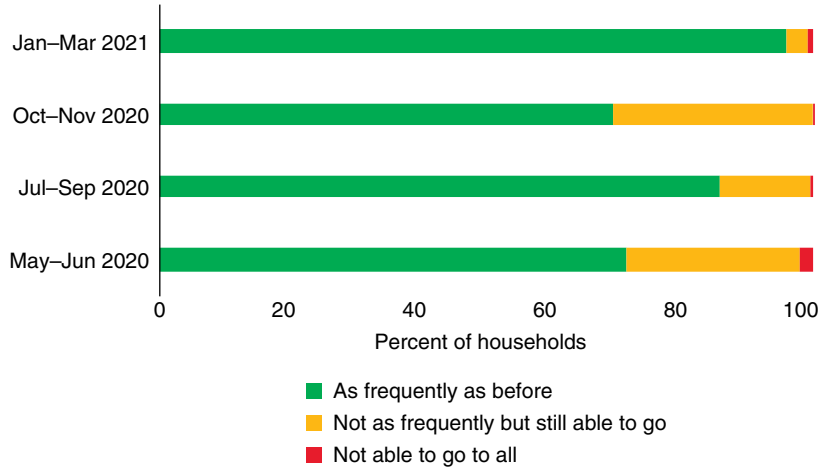



*Source:* Kenya COVID-19 RRPS.

## ACCESS TO HEALTH SERVICES IMPROVED AFTER IT HAD DROPPED AT THE START OF THE PANDEMIC.

Access to routine health check-ups has also improved in 2021 compared to 2020. 96 percent of households are able to access health services as frequently as before the pandemic (Figure 8). Good access to health services such as immunizations and prenatal check-ups is crucial to maintain human capital in the long run.

**FIGURE 8:** Ability to go for routine health check-ups compared to March 2020

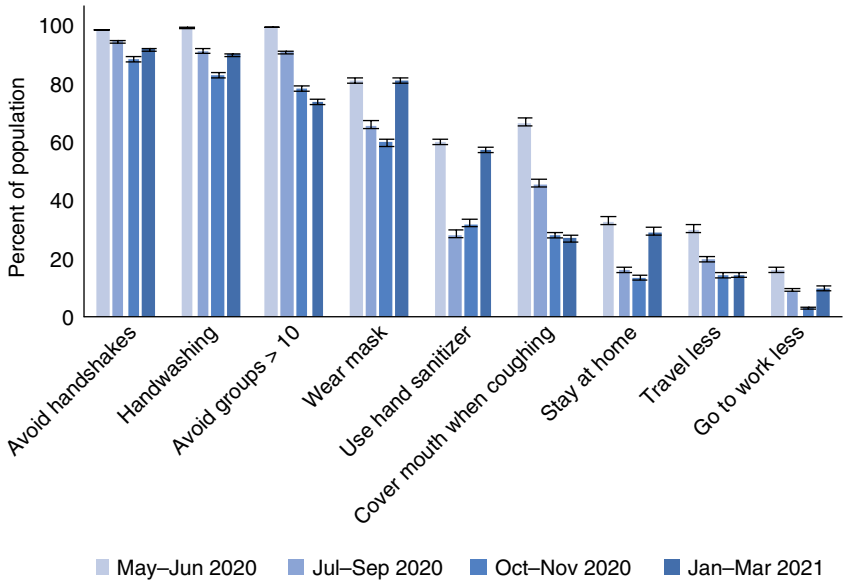



*Source:* Kenya COVID-19 RRPS.

## KENYANS HAVE BECOME LESS COMPLIANT IN FOLLOWING PHYSICAL DISTANCING MEASURES TO CURB THE SPREAD OF COVID-19.

Compliance with physical distancing measures such as avoiding large groups and staying at home have reduced in 2021 as compared to May–June 2020 (Figure 9). This behavior change can be attributed to pandemic fatigue, resulting from many months of restrictions on the daily lives of Kenyans.[8] However, some mitigation measures such as avoiding handshakes, handwashing, and wearing masks (92 percent, 90 percent, and 81 percent, respectively) have increased compared to the end of 2020 (Figure 9).

**FIGURE 9:** Behavioral changes in response to COVID-19



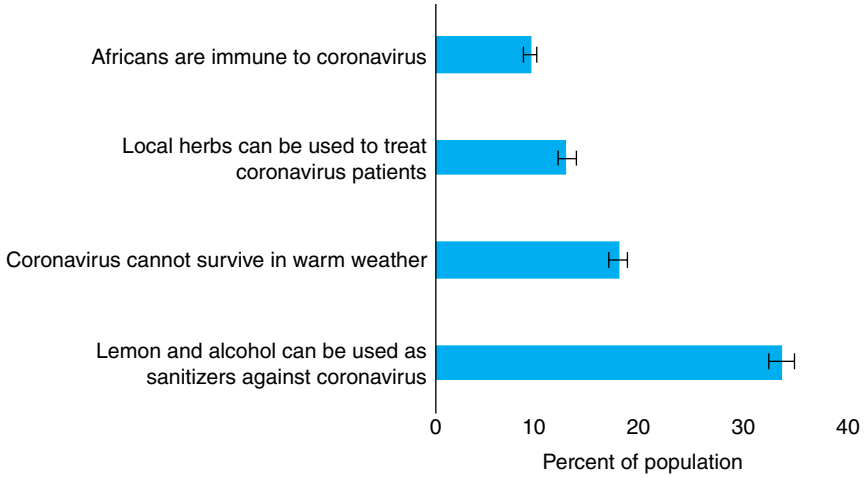

*Source:* Kenya COVID-19 RRPS.

8 World Health Organization. 2020. "Pandemic fatigue: reinvigorating the public to prevent COVID-19," see here.

## A YEAR INTO THE PANDEMIC, MISCONCEPTIONS REGARDING THE VIRUS WERE STILL PREVALENT.

Misinformation regarding COVID-19 was prevalent in Kenya. One-third of Kenyans believed that they can use lemon and alcohol as sanitizers against the virus; 17 percent believe that the coronavirus cannot survive in warm weather; and 13 percent think that local herbs can be used to treat COVID-19 (Figure 10). Such misconceptions may also contribute to low adoption of some preventive measures against the spread of the virus. It also demonstrates the continued need to provide accurate information about the virus.

**FIGURE 10:** Misconceptions regarding COVID-19 (January–March 2021)

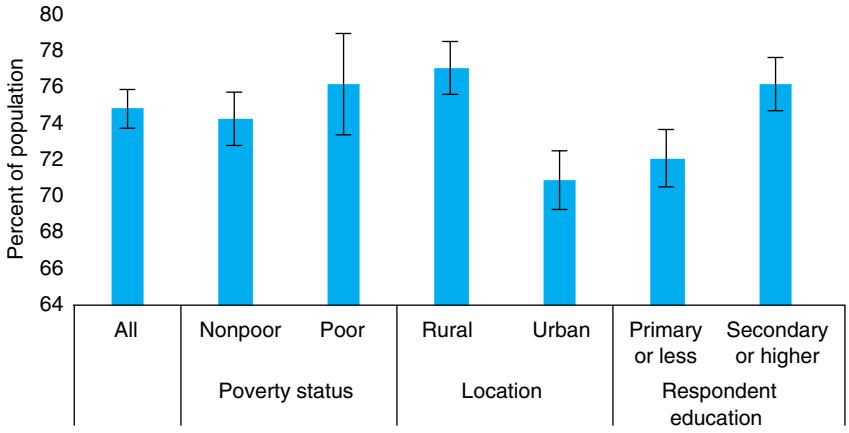



*Source:* Kenya COVID-19 RRPS.

## THE SHARE OF THE KENYAN POPULATION THAT WAS KEEN ON TAKING A COVID-19 VACCINE WAS 75 PERCENT.

If it were available at no cost, 75 percent of the population would take the COVID-19 vaccine (Figure 11). Those with at least a secondary education showed a greater willingness to take the vaccine. Out of the population that did not want a vaccine, 61 percent were worried about potential side effects, and 45 percent thought that the vaccine might not be safe (Figure 12). Building people's confidence and trust through localized public education is key to increase the uptake of the vaccine.[9]

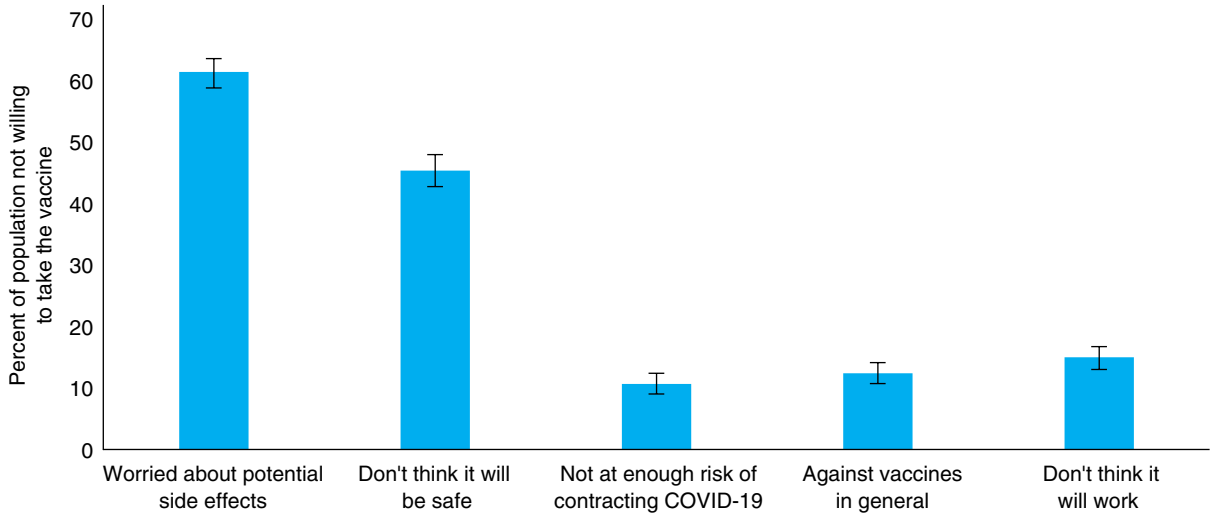
**FIGURE 11:** Willingness to take the vaccine, if available at no cost (January–March 2021)




*Source:* Kenya COVID-19 RRPS.

9 For more information: The City University of New York School of Public Health. 2020. "Coronavirus Vaccines Stir Doubts Among Many People Worldwide, New Study Shows," see here.
*Journal of Public Health* (Oxford, England). 2021. "Building public trust: a response to COVID-19 vaccine hesitancy predicament," see here.

**FIGURE 12:** Reasons for not taking COVID-19 vaccines (January–March 2021, multiple answers possible)




*Source:* Kenya COVID-19 RRPS.

## ANNEX: METHODOLOGY

**The Kenya COVID-19 RRPS for households is structured as a five-wave bimonthly panel survey that monitors the socioeconomic impacts of the pandemic and targets Kenyan nationals, refugees, and stateless people.** Households are interviewed every two months. Four rounds of the survey are already completed, with the first round having been implemented in May through June 2020, the second in July through September 2020, the third round in September through November 2020, and the fourth round in January through March 2021 (Table 1). Since the first week of data collection, an online dashboard displays weekly results on the impacts of COVID-19 on households in Kenya.[10]

**TABLE 1:** Sample size

| | Wave 1 | Wave 2 | Wave 3 | Wave 4 |
|---|---|---|---|---|
| **Data collection** | May 14 to July 7, 2020 | July 16 to September 18, 2020 | September 18 to November 28, 2020 | January 25 to March 25, 2021 |
| KNBS sample | 3,294 | 3,664 | 3,982 | 4,021 |
| RDD sample | 769 | 840 | 1,011 | 839 |
| UNHCR sample | 1,326 | 1,687 | 1,469 | 1,350 |
| **Total sample** | **5,389** | **6,191** | **6,462** | **6,210** |

*Source:* Kenya COVID-19 RRPS.

**The survey questionnaire for households was designed to allow for international comparability.** To ensure that findings are comparable across countries, the Kenya COVID-19 RRPS was designed to both allow comparison across countries that have implemented surveys on the impact of COVID-19 and measure the impacts of the pandemic in Kenya specifically. Therefore, the questionnaire maintained most core questions from the global template of the World Bank and added country specific questions for a better understanding of the effects of COVID-19 on Kenyan households.[11] The Kenya COVID-19 RRPS for households questionnaire covers a range of topics including employment, income, coping strategies, food security, access to education and health services, subjective well-being, knowledge of COVID-19, changes in behavior in response to the pandemic, and perceptions of the government's response. The definition of a household in this survey was "a person, or group of people, that eats from the same pot and spends four nights or more in an average week sleeping in the same home," which is aligned with the one used by the Kenya National Bureau of Statistics (KNBS).

**The survey sample was drawn from three different sampling frames.** The first is a randomly drawn subset of the 2015/16 Kenya Integrated Household Budget Survey (KIHBS). The 2015/16 KIHBS is representative at the national level, stratified by county and place of residence (urban and rural areas). To select the sample, the Kenya COVID-19 RRPS firstly identified all households that were part of the KIHBS CAPI and provided a phone number and used the resulting list of 9,009 households as a sampling frame. The second sample comprises households selected using the Random Digit Dialing (RDD) method, whereby phone numbers potentially existing in Kenya are randomly generated. A list of random mobile phone numbers was created using a random number generator from the 2020 Numbering Frame produced by the Kenya Communications Authority. The initial sampling frame consisted of 92,999,970 randomly ordered phone numbers assigned to three networks: Safaricom, Airtel, and Telkom. An introductory text message was sent to 5,000 randomly selected numbers to determine if numbers were in operation. Out of these, 4,075 were found to be active and formed the final sampling frame. There was no stratification and individuals that were reached through the selected phone numbers were asked about the households they live in. These first two groups cover urban and rural areas and are designed to be representative of the population of Kenya using cell phones. The third RRPS sample consisted of urban and camp-based refugees as well as stateless people registered by the UNHCR. The sample aims to be representative of the refugee and stateless population in Kenya. It comprises five strata: Kakuma refugee camp, Kalobeyei settlement, Dadaab refugee camp, urban refugees, and Shona stateless, where sampling approaches differ across strata.

**The COVID-19 RRPS household survey was only able to include households with a valid phone number.** As phone surveys can only reach respondents who use a phone with an active subscription in an area with network coverage, statistics are only representative for this part of the population. Nationally, 80 percent of Kenyan households report owning a mobile phone. Although cell phone penetration and coverage are high, the sample excludes those households without a registered number, potentially excluding to some extent the poorest

10 For access to further details on the survey, weekly results, and micro-data library, check here.
11 For access to the global questionnaire template, see here.

households who do not own phones or who live in areas with no network coverage. The areas in the northeast of Kenya have the lowest mobile phone penetration and are among the most vulnerable counties in Kenya, whereas, central and southern regions display a much higher mobile phone penetration. Households providing a phone number in household surveys such as the KIHBS CAPI have better living conditions. The Kenya RRPS uses reweighting techniques to enhance representativeness of the overall sample. More information is provided in the more extensive report related to this survey: "Socioeconomic impacts of COVID-19 in Kenya, on households, round 1."[12]

**To address potential bias, some interviews were dropped from the labor analysis in rounds 2, 3, and 4.** Despite the random allocation of households to enumerators, high variability is observed in reported employment across enumerators. To reduce inconsistencies and obtain unbiased labor statistics, interviews collected by some enumerators were omitted from the labor analysis.[13] This results in 596 of the 6,192 households in wave 2, 1,109 of the 6,462 households in wave 3, and 380 of the 6,210 households in wave 4 being dropped from the labor analysis. The weights for the remaining households have been adjusted to account for the dropped observations.

**Sampling weights were constructed for each stratum to consider different probabilities of selection at baseline.** A two-step approach was used to create the weights for the national sample provided by the KIHBS CAPI and RDD method. As a first step, raw weights were constructed for three groups of households: (i) households that existed in 2015/16, and did not change phone numbers, (ii) households that existed in 2015/16, but changed phone numbers, and (iii) households that did not exist in 2015/16. The baseline weights from the 2015/16 KIHBS CAPI pilot make the KIHBS sample representative of type (i) households. For RDD households, we ask whether they existed in 2015/16, when they had acquired their phone number, and where they lived in 2015/16, allowing us to classify them into type (i), (ii), and (iii) households and assign them to KIHBS CAPI strata. We adjust weights of each RDD household to be inversely proportional to the number of mobile phone numbers used by adult members of the household, and scale them relative to the average number of mobile phone numbers used in the KIHBS within each stratum. RDD therefore gives us a representative sample of type (ii) and (iii) households. We then combine RDD and KIHBS type (i) households by ex-post, adding RDD households into the 2015/16 sampling frame and adjusting weights accordingly. Last, we combine our representative samples of type (i), type (ii), and type (iii) using the share of each type within each stratum from RDD. As a second step, we use post-stratification to adjust for differential attrition and response rates across counties and rural/urban strata, ensuring all geographic areas in Kenya were appropriately accounted for. We scale the raw weights from step 1 above to reflect the population size in each county and rural/urban stratum as recorded in the 2019 Kenya Population and Housing Census conducted by the KNBS. For the five refugee and stateless samples, sampling weights were tailored to the respective sampling strategies. Weights were then scaled to match population totals as provided by the up-to-date UNHCR registration data.

**For each household, a target respondent is followed throughout all survey waves.** All households in the sample were targeted in each wave independent of whether they were reached in a previous wave. The only exception was households that explicitly stated that they don't want to be called again in future waves. This means some households were interviewed for the first time after wave 1. In each household we follow one target respondent. In the 2015/16 KIHBS sample, the target respondent was the primary male or female from the 2015/16 KIHBS, which was randomly chosen where both existed. In the RDD and UNHCR samples, the target respondent was the owner of the phone number drawn for the sample. If the target respondent was not available for a call, the field team spoke to any adult currently living in the household of the target respondent. If the target respondent was deceased, the field team spoke to any adults that lived with the target respondent in 2015/16. Finally, if the household from 2015/16 split up, we targeted anyone in the household of the target respondent but did not survey a household member that no longer lives with the target respondent.

12 World Bank. 2020. "Socioeconomic impact of COVID-19 in Kenya, on households, round 1."

13 For each enumerator, the mean proportion of households without any employment is calculated. For waves 2 and 3, the 95 percent confidence interval of this mean proportion is established across all enumerators. Enumerators who display a proportion of households with no employment above the upper bound of the confidence interval are dropped. For wave 4, those enumerators with a mean proportion of households without any employment 1 standard deviation above the mean proportion across all enumerators are dropped from the labor analysis.