Socioeconomic Impacts of COVID-19 in Kenya

June, 2021[1]

- The COVID-19 pandemic has had a strong impact on the livelihoods of Kenyan households, even though employment and income levels are recovering.
- The second lockdown resulted in another surge in food insecurity. While access to education worsened again due to renewed school closures, health services remained widely accessible to the population.
- Kenyans are well informed about the preventive measures to avoid COVID-19 infections, and compliance with hygiene measures against the virus increased again during the second lockdown.
- The majority of Kenyans would be willing to take a COVID-19 vaccine, but many are concerned about potential side effects.
- One-half of the Kenyan population is anxious due to the fear of contracting COVID-19 and potential employment losses.

THE COVID-19 PANDEMIC CONTINUES TO AFFECT DAILY LIVES DESPITE SUCCESSES IN THE VACCINATION DRIVE.

Kenya has taken a range of steps to reduce the spread of the pandemic, such as restrictions on movement, closure of schools, and bans on social gatherings. Restrictions to mitigate the spread of COVID-19 were first put in place on March 12, 2020, and were eased toward the end of 2020. A second lockdown was announced in five counties on March 24, 2021, after Kenya recorded a strong increase in the number of COVID-19 infections. Nevertheless, on May 2, 2021, as the number of cases dropped, the lockdown was lifted again allowing for openings of bars and restaurants, religious services, and schools. On June 12, 2021, Kenya reported 175,000 recorded cases of COVID-19 (Figure 1).

**FIGURE 1:** COVID-19 cases and RRPS timeline in Kenya
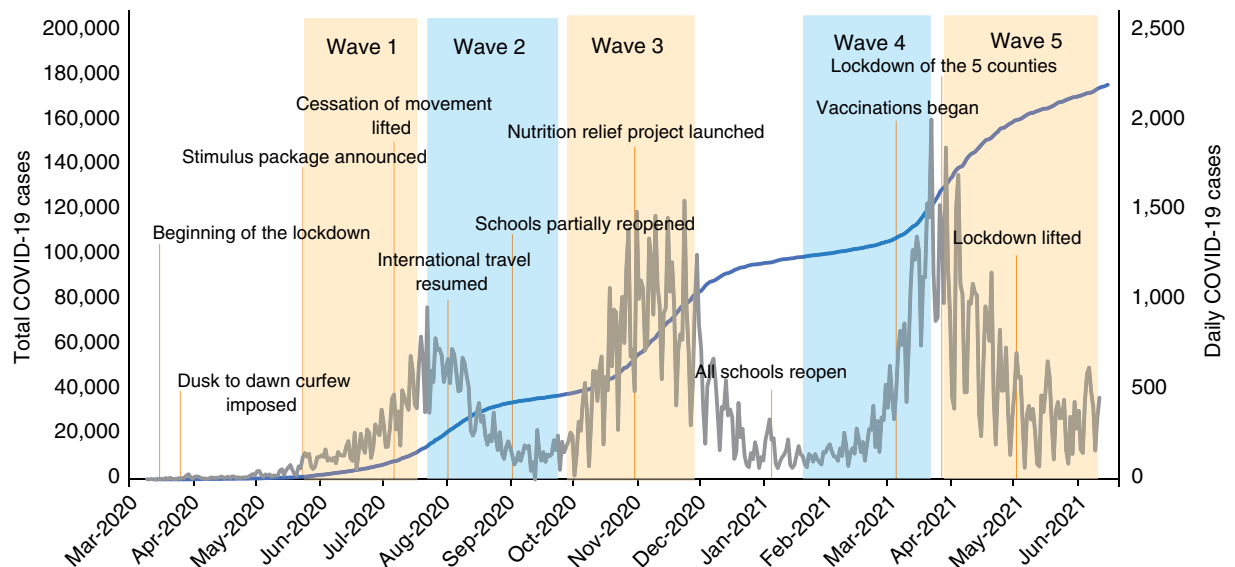
Source: Our World in Data.[2]

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2 Our World in Data. Data downloaded on June 14, 2021, here.

To combat the virus, Kenya received about 1 million doses of the AstraZeneca vaccine under the global COVAX initiative on March 3, 2021. By May 12, 2021, around 930,000 Kenyans had received their first dose of the vaccine.[3] Due to a shortage of vaccine doses, the Ministry of Health decided to shift the second dose of vaccine from 8 to 12 weeks after the first dose, such that people who received their first jab in the beginning of March would be receiving their second dose in the beginning of June. Kenya received an additional 72,000 doses of AstraZeneca vaccine on May 29, 2021, that South Sudan had returned to the COVAX initiative as they feared vaccine expiration due to logistical challenges. Kenyans began to receive the second dose of the AstraZeneca vaccine on May 28, 2021. Over 125,000 people had received the second dose of the vaccine by June 12, 2021. Kenya has also ordered 30 million doses of the Johnson and Johnson vaccine from South Africa, of which 10 million are expected to arrive by August 2021 (Figure 2).[4]

FIGURE 2: Vaccination in Kenya, 2021
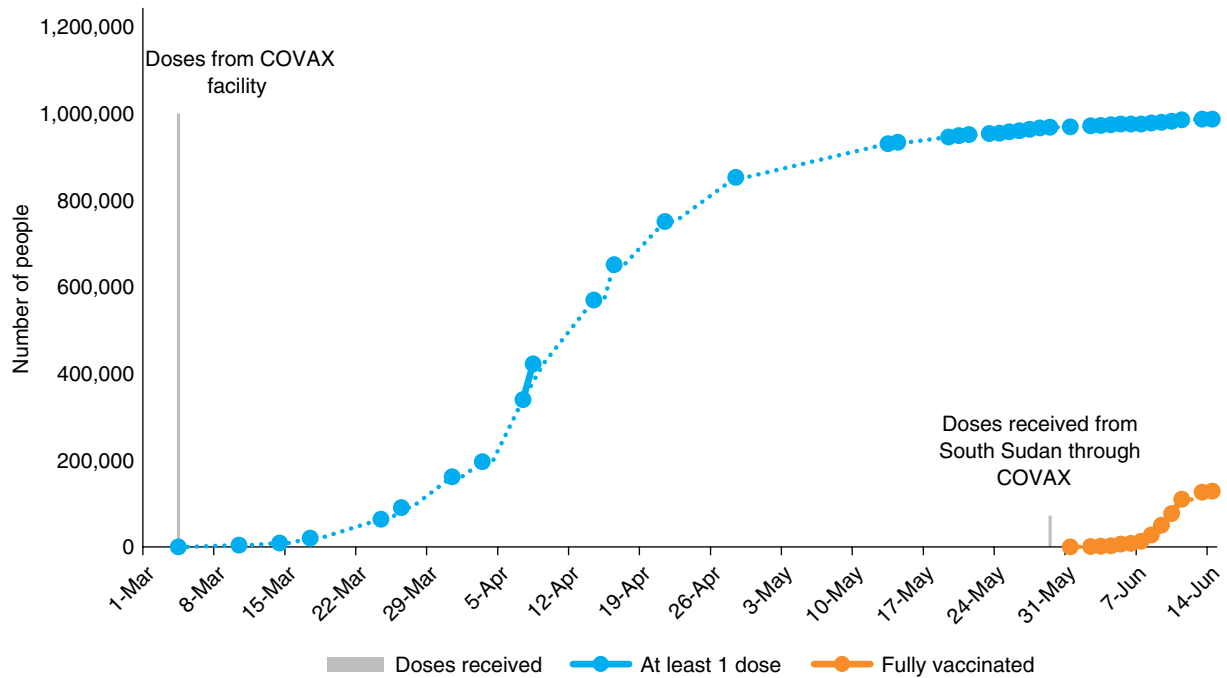
Source: Our World in Data.[5]

The Kenyan economy showed signs of recovery at the start of 2021, but it was partially halted by the renewed lockdown in April and May. 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 June 2021.[6]

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3 COVAX is led by the World Health Organization (WHO) and the Coalition for Epidemic Preparedness Innovations (CEPI) to provide rapid and equitable access of COVID-19 vaccines to low- and middle-income countries. For more details on COVAX, see here. For more information on vaccines in Kenya, see here.

4 See here for the announcement of the Ministry of Health from May 27, 2021.

5 Our World in Data. Data downloaded on June 14, 2021, here.

6 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.

EMPLOYMENT LEVELS WERE STRONGLY IMPACTED BY THE PANDEMIC BUT HAVE NOW RECOVERED.

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.[7] However, employment levels increased to 76 percent in April–June 2021 while unemployment dropped more than one-half, from 16 percent in October–November 2020 to 7 percent in April–June 2021 (Figure 3). Labor force participation reached the highest level since the start of the pandemic (82 percent in April–June 2021). The largest employment shock was felt in the urban and the more educated parts of the population (24 and 19 percent unemployment, respectively in October–November 2020). However, both groups have also recovered quickly, as unemployment is slowly reaching pre-COVID-19 levels in April–June 2021 (9 and 8 percent, respectively; Figure 4).

FIGURE 3: Labor force statistics (18–64 years)
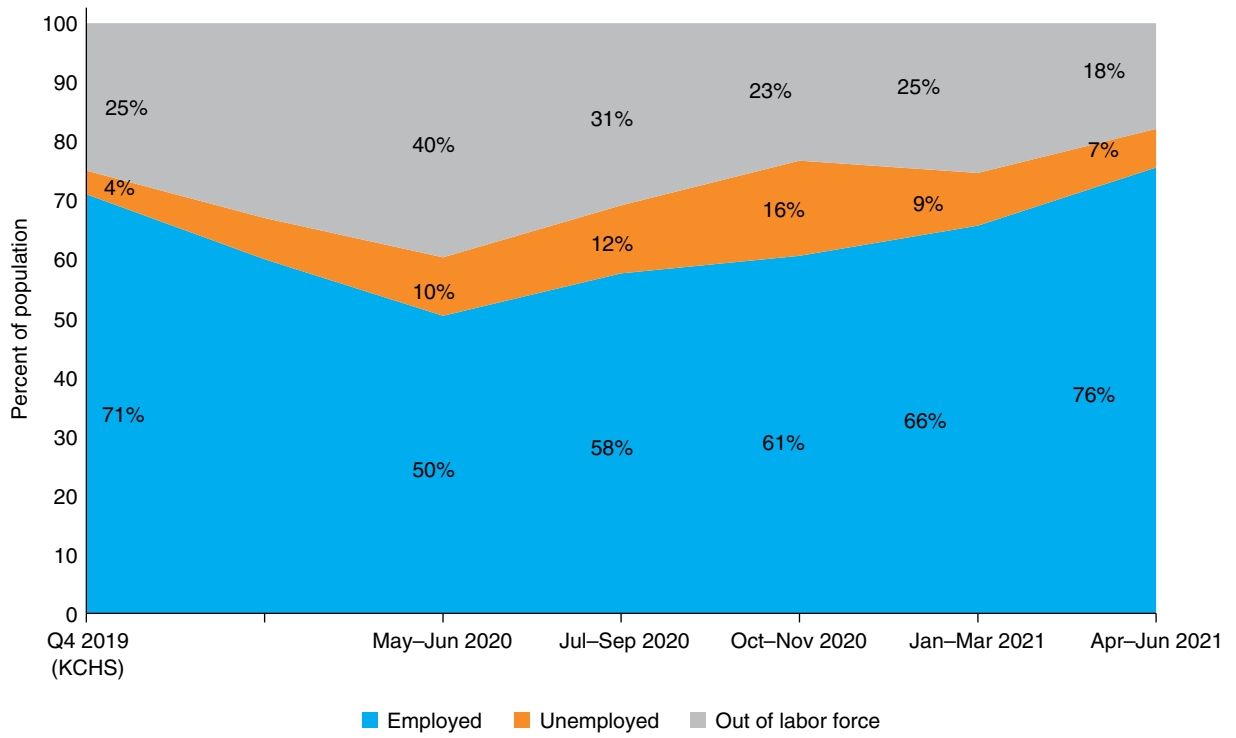
Source: Kenya COVID-19 RRPS and 2019 KCHS.

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7 Given the mode of data collection, the phone surveys have a less comprehensive labor module than the Kenya Continuous Household Survey (KCHS) used to produce the quarterly labor indicators released by the KNBS. 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). Therefore, the labor results from the RRPS are meant to provide an indication of the ongoing labor trends.
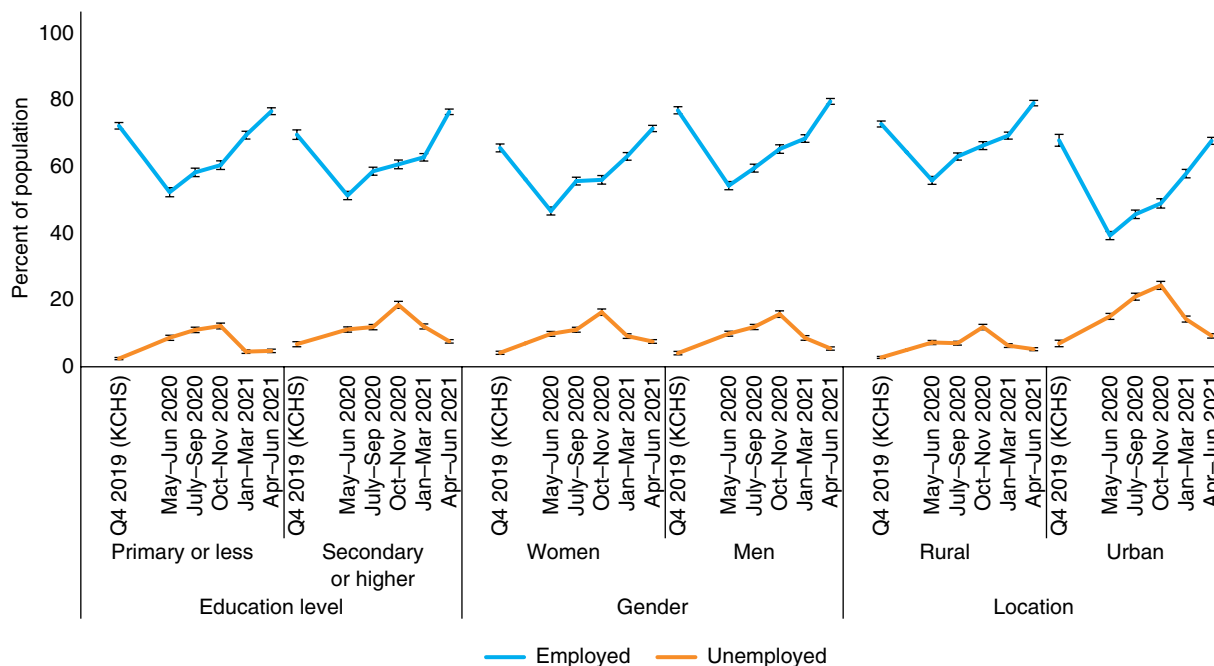
Source: Kenya COVID-19 RRPS and 2019 KCHS.

## MORE HOUSEHOLDS RECEIVED SUPPORT FROM OUTSIDE THE HOUSEHOLD COMPARED TO EARLIER MONTHS OF THE PANDEMIC.

Support from outside the household can help the population meet their needs during the pandemic. The share of households receiving such support has tripled compared to the start of the pandemic (27 percent in April–June 2021 vs. 9 percent in May–June 2020). The increase was mainly driven by additional households receiving remittances (22 percent; Figure 5), which were mainly sent domestically. However, international remittances also picked up again, increasing by 27 percent between March 2020 and March 2021, as reported by the Central Bank of Kenya.[8] For one-half of all households receiving remittances, the amounts received in April–June 2021 have reduced as compared to before the pandemic (Figure 6). Very few households received government or nongovernmental organization (NGO) assistance (4 and 1 percent, respectively).
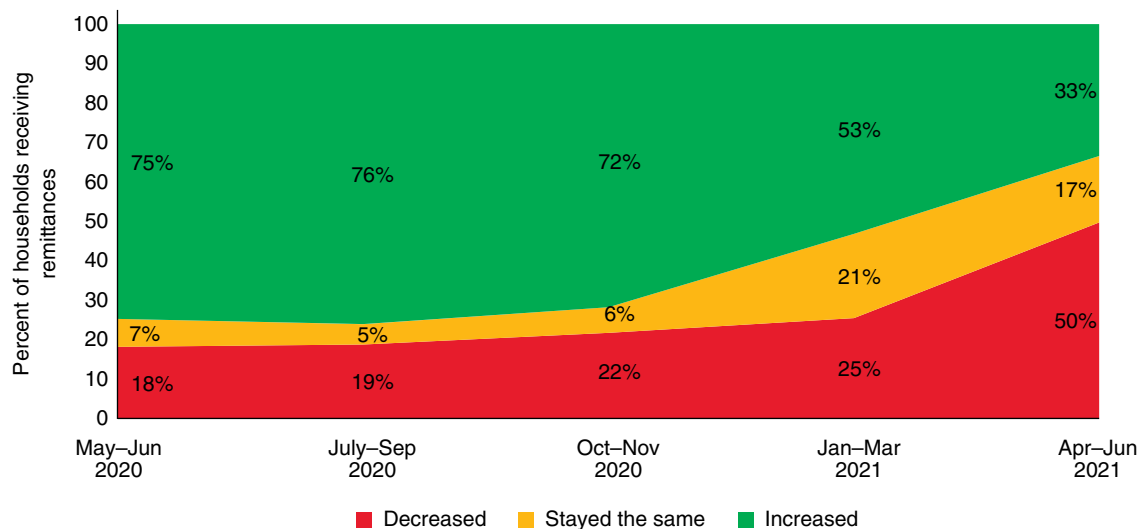
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8 For more details on diaspora remittances, see here.

FIGURE 5: Support from outside the household
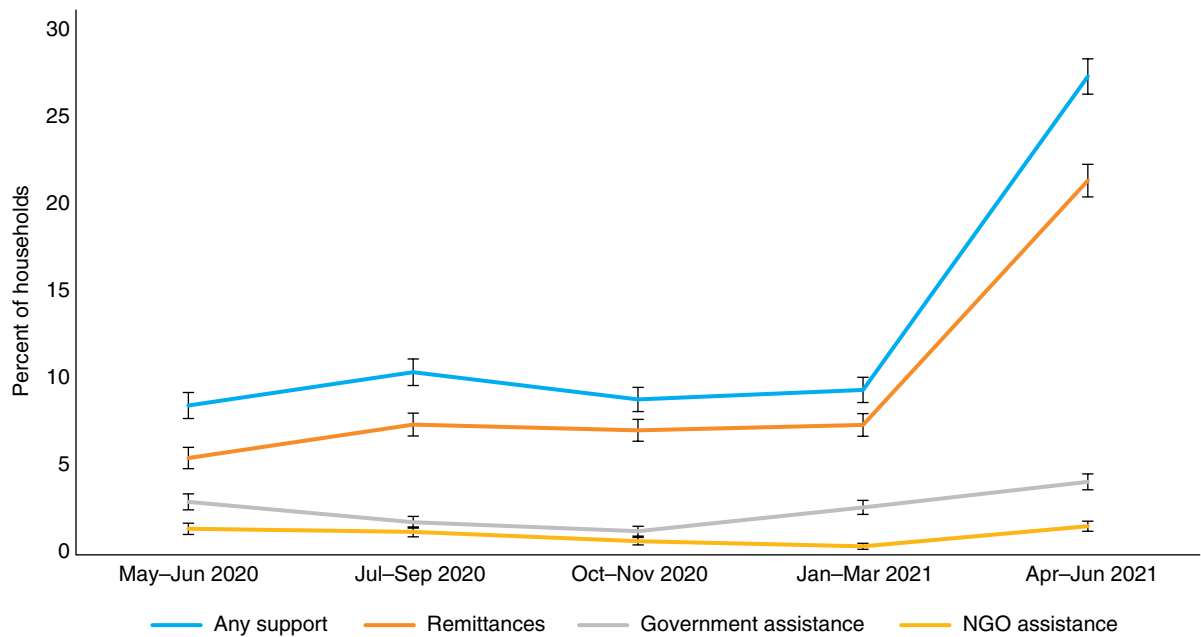
Source: Kenya COVID-19 RRPS.

**FIGURE 6:** Changes in remittance values compared to February 2020

Source: Kenya COVID-19 RRPS.

MORE HOUSEHOLDS HAD TO EMPLOY COPING STRATEGIES TO DEAL WITH THE IMPACT OF THE PANDEMIC THAN AT ANY OTHER TIME SINCE ITS ONSET.

Most Kenyan households had to adopt one or more strategies to cope with the impact of the pandemic (88 percent in April–June 2021). They relied on their savings and reduced their food consumption in May–June 2020. As the pandemic continued, the reduction of food and nonfood consumption became more prevalent, with over one-half of households reducing their food and nonfood consumption in July–September. Just over one-fourth of households also started to engage in additional income generating activities after July–September 2020, which remained a common strategy. In April–June 2021, more than one-third of the households used this strategy. Relying on savings became the most prominent coping mechanism in 2021 (42 percent in January–March 2021 and 39 percent in April–June 2021). At the same time, a lot of households still relied on reducing food (29 percent) and nonfood consumption (33 percent), possibly due to the second lockdown (Figure 7).

**FIGURE 7:** Coping mechanisms (multiple answers possible)

Percent of households

■ May–Jun 2020   ■ Jul–Sep 2020   ■ Oct–Nov 2020   ■ Jan–Mar 2021   ■ Apr–Jun 2021
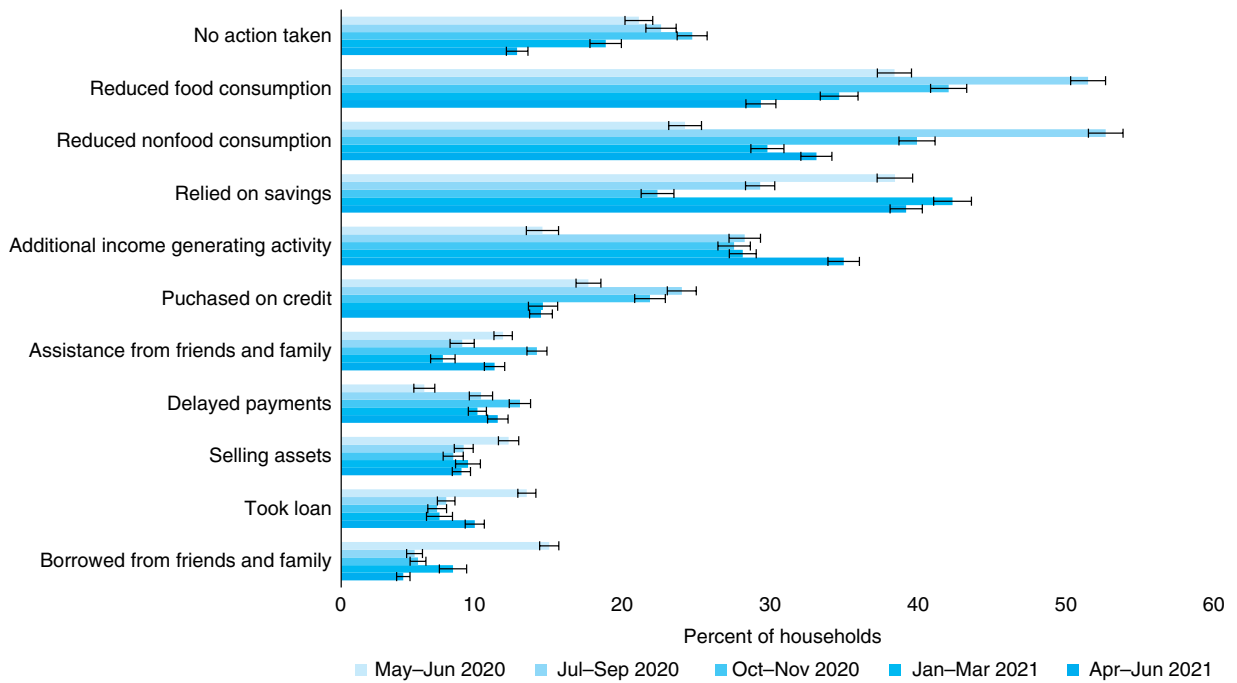
Source: Kenya COVID-19 RRPS.

THE LEVEL OF FOOD INSECURITY ROSE AGAIN DURING THE SECOND LOCKDOWN IN 2021.

At the onset of the pandemic and during the first lockdown in May–June 2020, just under 50 percent of households went hungry, which declined to 28 percent in October–November 2020 (Figure 8). Nevertheless, following the second lockdown in April–June 2021, levels of food insecurity rose again. Lack of food is still an issue for 42 percent of households, especially for rural ones, where almost every second household does not have sufficient food to eat. A lack of food can directly impact the ability of adults and children to undertake a normal, healthy, and productive life, leading instead to malnutrition, stunting, and human capital losses.[9]

FIGURE 8: Went hungry due to lack of food (past 30 days)
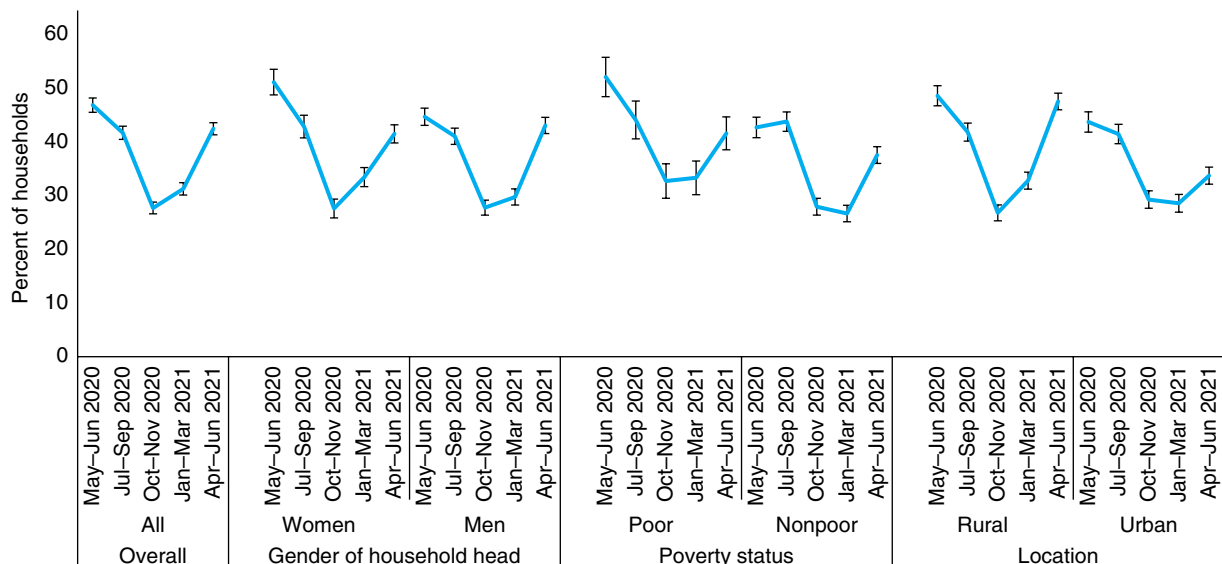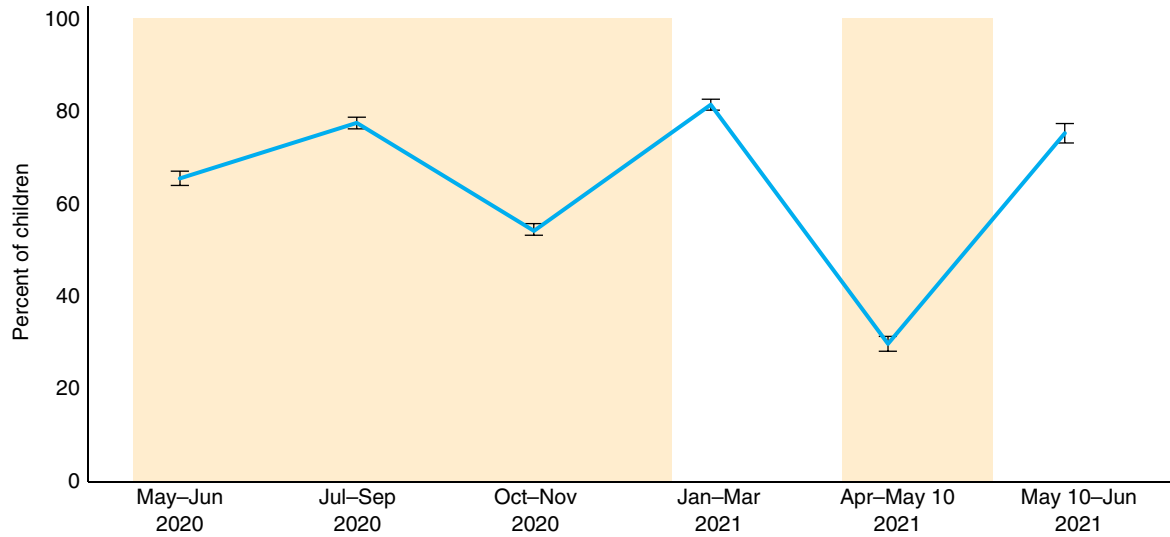

Source: Kenya COVID-19 RRPS.

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

CHILDREN ENGAGED IN LEARNING ACTIVITIES WHEN SCHOOLS OPENED AFTER LIFTING OF THE SECOND LOCKDOWN.

Schools closed in March 2020 because of the COVID-19-related restrictions. This strongly impacted access to education, although 79 percent of children were engaged in learning activities in July–September 2020. During this time, children were either taught by their parents or were engaged in self-directed learning. However, as months passed fewer children were learning, reducing to 55 percent in October–November 2020. Schools reopened on January 4, 2021, and learning increased to 83 percent during January–March 2021. Due to a rising number of COVID-19 infections, schools closed again between March 19 and May 10, 2021, with a second lockdown. During this period, particularly few children engaged in learning activities (31 percent). However, when schools re-opened, 76 percent of children started to learn again (Figure 9).

FIGURE 9: Engaged in learning activities

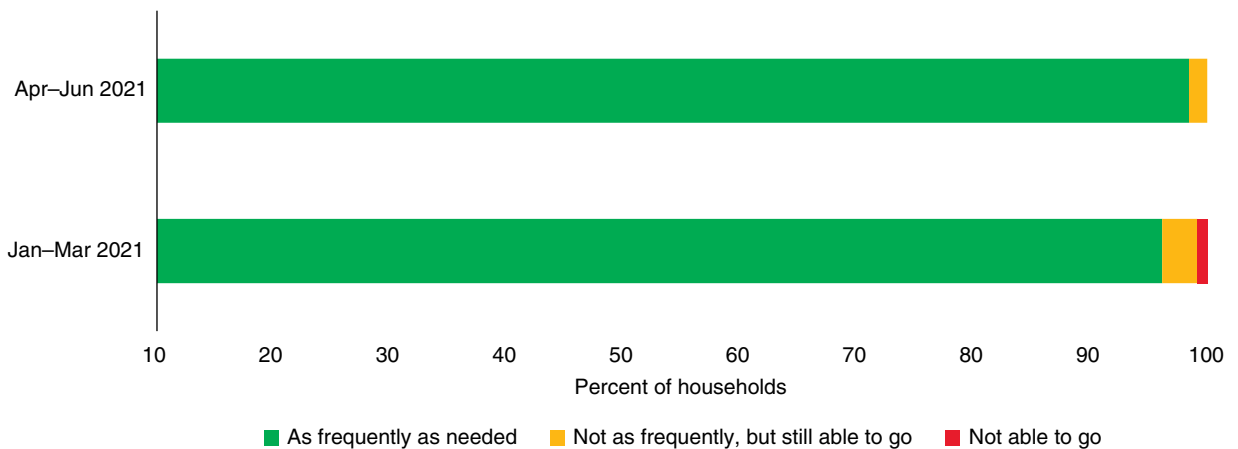

Source: Kenya COVID-19 RRPS.
Note: Yellow shaded area indicates school closures.

## ROUTINE HEALTH SERVICES REMAIN ACCESSIBLE.

Almost the entire Kenyan population was able to access routine health checkups when needed in April–June 2021 (Figure 10). Access to medicines is almost universal, with 99 percent of the population being able to purchase necessary medicine in April–June 2021, with not much difference between urban and rural households (Figure 11). Good access to health services, such as immunizations and prenatal checkups, is crucial to maintain human capital in the long run.

FIGURE 10: Ability to go for routine health checkups as frequently as needed

■ As frequently as needed   ■ Not as frequently, but still able to go   ■ Not able to go

Source: Kenya COVID-19 RRPS.

FIGURE 11: Households not being able to access medicines
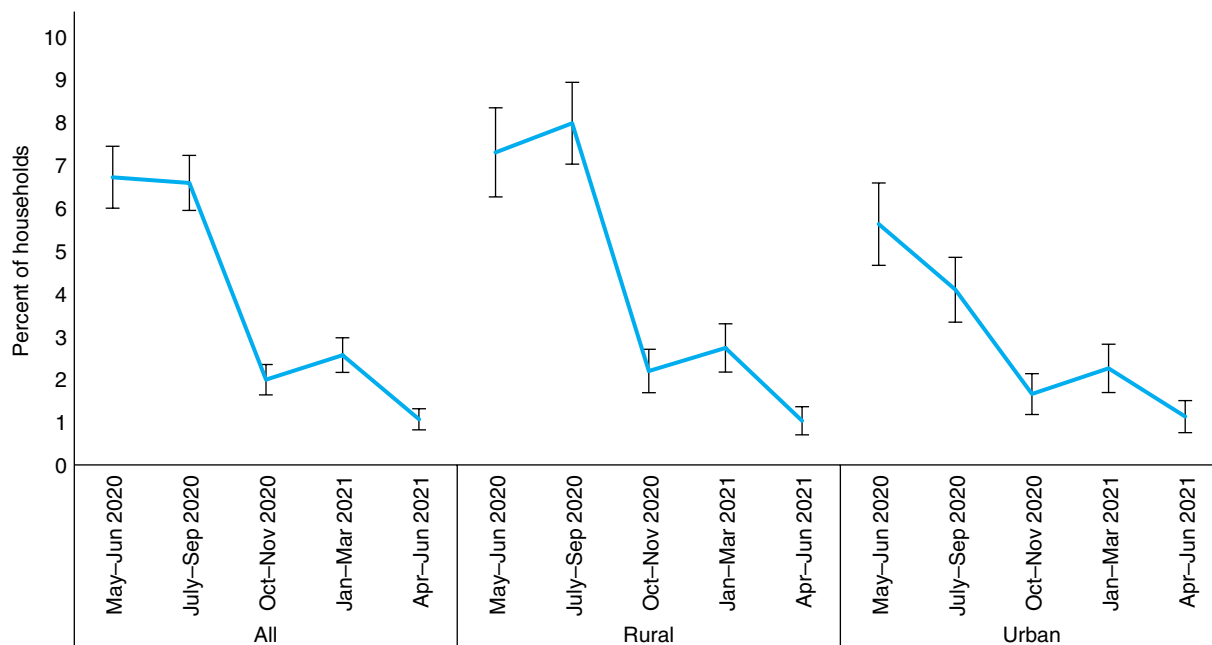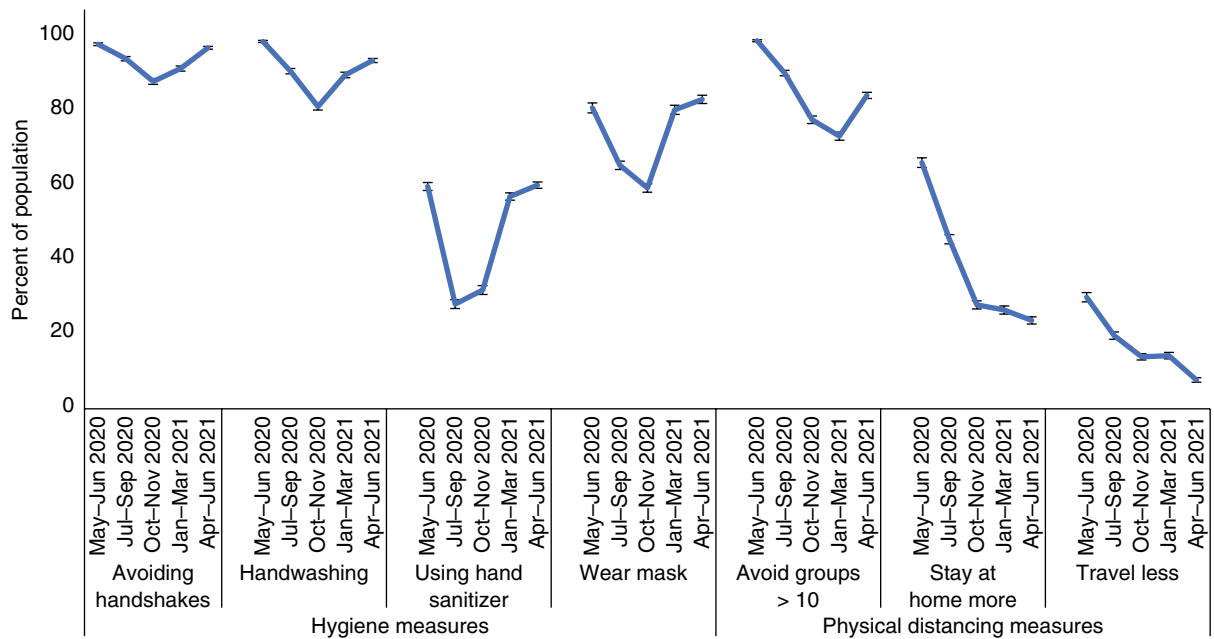

Source: Kenya COVID-19 RRPS.

VARIOUS PREVENTIVE MEASURES ARE FOLLOWED BY THE KENYAN POPULATION TO CURB THE SPREAD OF THE PANDEMIC.

As the pandemic began, various preventive measures were followed by the entire Kenyan population to curb the spread of the pandemic. However, as restrictions on movement continued and the number of COVID-19 infections decreased, compliance with preventive measures declined during the last few months of 2020.[10] Nevertheless, as the number of infections began to rise again, and with a new lockdown announced on March 24, 2021, compliance with hygiene measures such as avoiding handshakes, handwashing, and wearing masks increased again in April–June 2021 (97 percent, 94 percent, and 83 percent, respectively; Figure 12). However, only 24 percent of Kenyans were more often staying at home due to the risk of COVID-19 during April–June 2021.

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

FIGURE 12: Behavioral changes in response to COVID-19

Source: Kenya COVID-19 RRPS.

KENYANS ARE WELL INFORMED ABOUT PREVENTIVE MEASURES TO MITIGATE THE SPREAD OF COVID-19.

Almost the entire Kenyan population is well informed about the preventive measures regarding COVID-19. Compliance with these preventive measures is key to curb the spread of the virus. Ninety-four percent of the Kenyans also believe that a vaccine would reduce their risk of getting infected by COVID-19 (Figure 13).[11]

FIGURE 13: Knowledge about COVID-19 (April–June 2021)
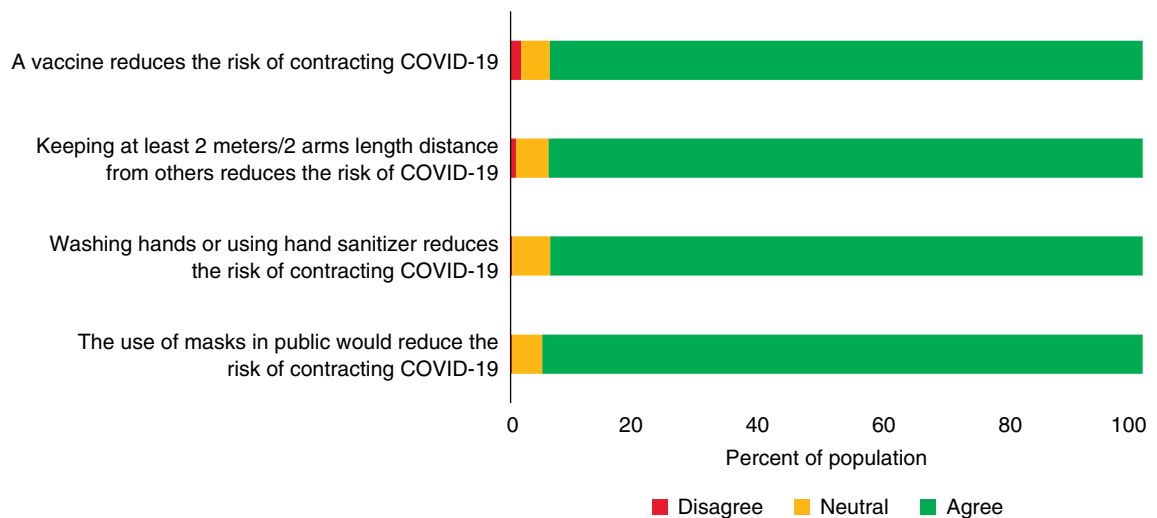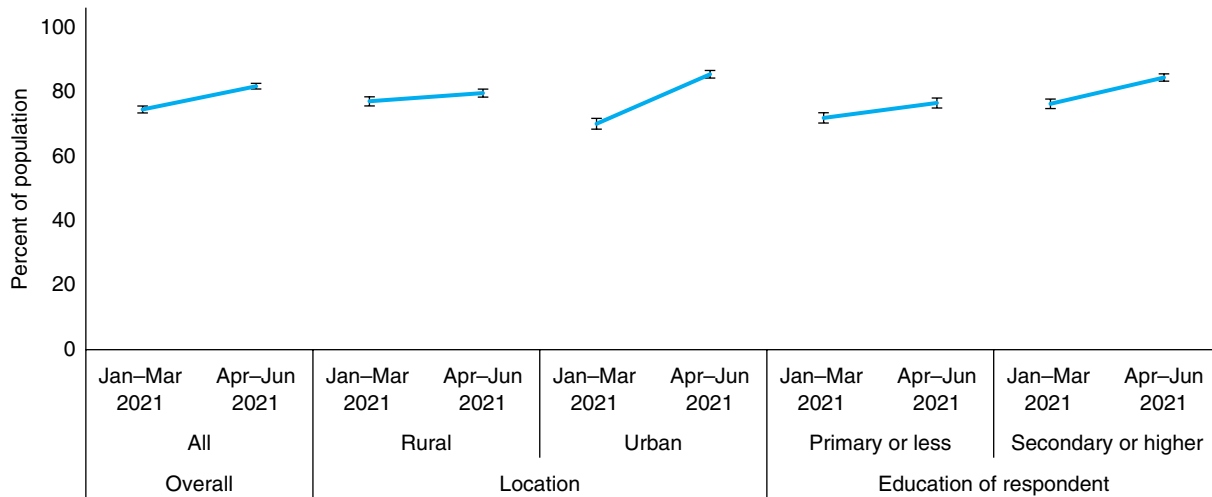

Source: Kenya COVID-19 RRPS.

11 For more details on preventive measures to mitigate the spread of COVID-19, see here.

THE MAJORITY OF THE KENYAN POPULATION WERE WILLING TO TAKE A COVID-19 VACCINE.

Most of the Kenyan population would take a COVID-19 vaccine if it were available at no cost during April–June 2021 (82 percent, Figure 14). The urban and the higher educated parts of the population showed a greater willingness to take a COVID-19 vaccine. Out of the population that did not want a vaccine, 69 percent were worried about potential side effects and just under 33 percent thought that the vaccine might not be safe (Figure 15). Building people's confidence and trust through localized public education remains key to increase the uptake of the vaccine.[12]

FIGURE 14: Willingness to take a vaccine, if available at no cost

Source: Kenya COVID-19 RRPS.

FIGURE 15: Reasons for not taking COVID-19 vaccines (multiple answers possible)
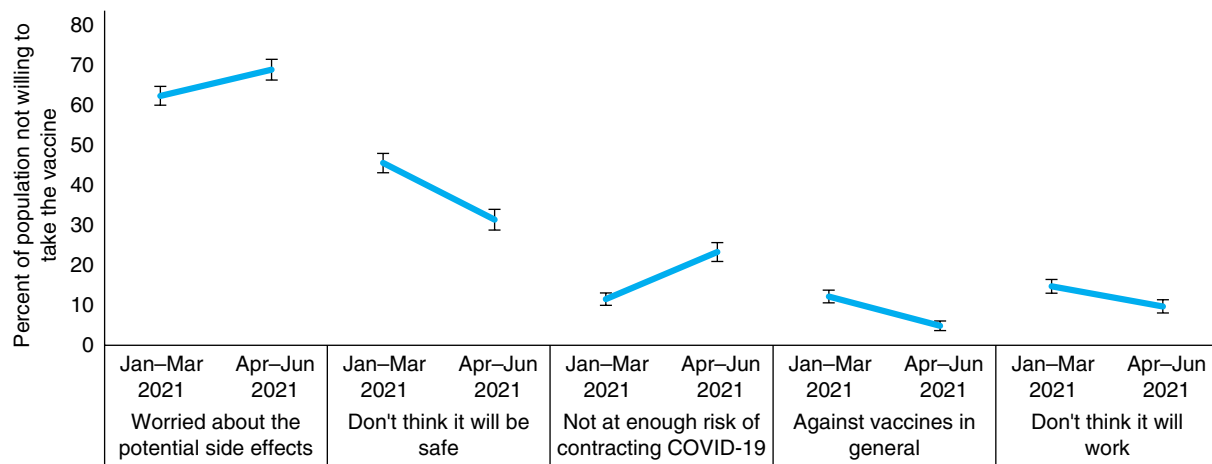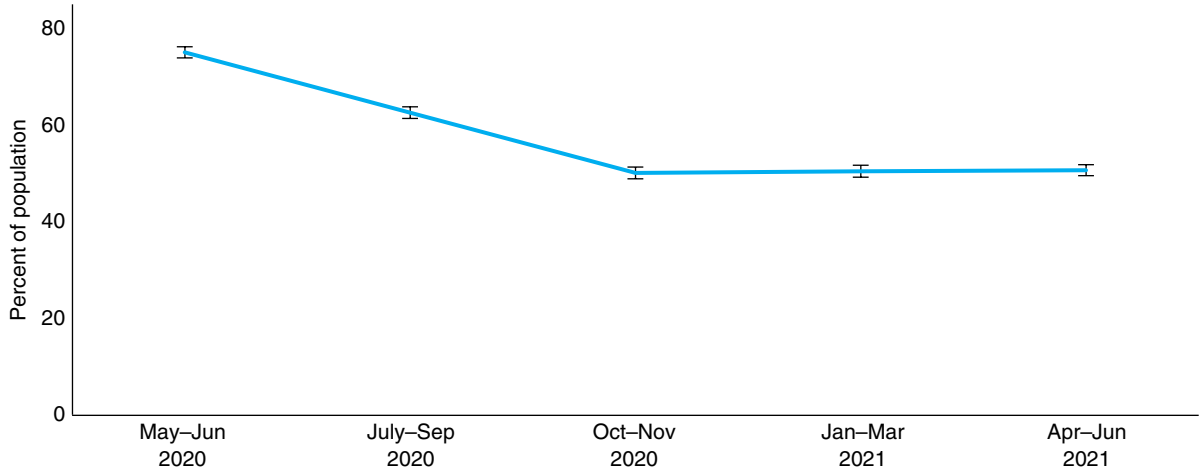

Source: Kenya COVID-19 RRPS.

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12 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.

HALF OF THE KENYAN POPULATION IS STILL ANXIOUS ABOUT THE COVID-19 PANDEMIC.

At the start of the pandemic, 75 percent of individuals were anxious about the pandemic. In April–June 2021, 50 percent of the Kenyan population still felt anxious about COVID-19 (Figure 16). Out of the population that felt anxious about the pandemic, 75 percent feared getting infected by the virus. Forty-seven percent worried about employment losses, and 45 percent worried about an economic crisis in April–June 2021 (Figure 17).

FIGURE 16: Feeling anxious about COVID-19 outbreak

Source: Kenya COVID-19 RRPS.

FIGURE 17: Reasons for being anxious about the COVID-19 pandemic (multiple answers possible)
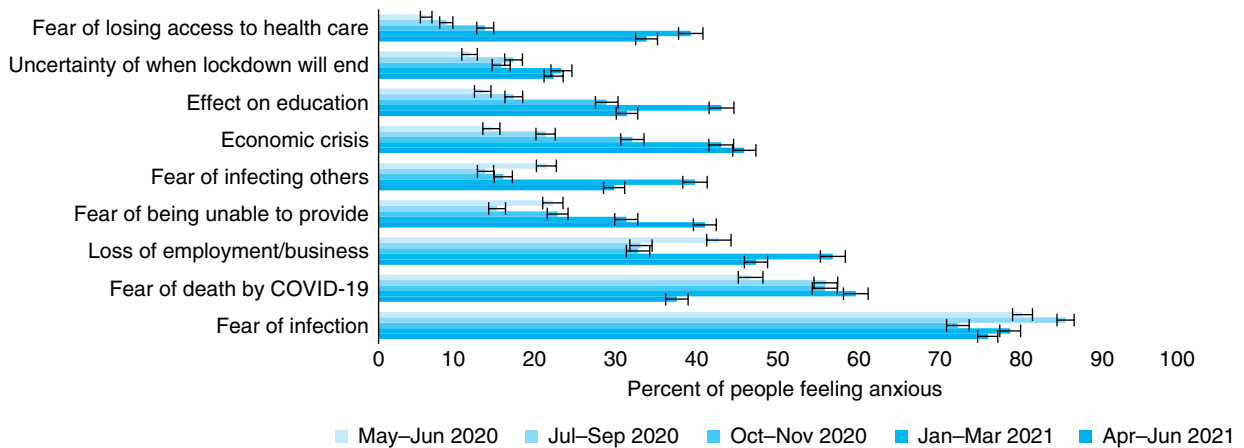
Source: Kenya COVID-19 RRPS.

ANNEX: METHODOLOGY

The Kenya COVID-19 RRPS for households is structured as a 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. Five 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, the fourth round in January through March 2021, and the fifth round in March through June, 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.[13]

TABLE 1: Sample size

	Round 1	Round 2	Round 3	Round 4	Round 5
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	March 29 to June 13, 2021
KNBS sample	3,294	3,664	3,982	4,060	4,710
RDD sample	769	840	1,011	846	1,164
UNHCR sample	1,326	1,687	1,469	1,357	1,536
Total sample	**5,389**	**6,191**	**6,462**	**6,263**	**7,410**

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 to 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.[14] 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 pilot 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 populations 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

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13 For access to further details on the survey, weekly results, and micro-data library, check here.
14 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 compared to those who don't provide a number. 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."[15]

Sampling weights were constructed for each stratum to consider different probabilities of selection at the 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 (1) households that existed in 2015/16, and did not change phone numbers, (2) households that existed in 2015/16, but changed phone numbers, and (3) 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 (1) 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 (1), (2), and (3) 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. The RDD therefore gives us a representative sample of type (2) and (3) households. We then combine the RDD and KIHBS type (1) households by ex post adding the RDD households into the 2015/16 sampling frame and adjusting weights accordingly. Last, we combine our representative samples of type (1), type (2), and type (3), using the share of each type within each stratum from the 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.

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.[16] This results in 596 of the 6,192 households in round 2, 1,109 of the 6,462 households in round 3, and 380 of the 6,210 households in round 4 being dropped from the labor analysis. The weights for the remaining households have been adjusted to account for the dropped observations.

The education status of household members, except for the respondent, was imputed for rounds 1 and 2. For rounds 1 and 2, only the education status of the respondent was elicited, while for later rounds the education status for each household member was asked. In order to evaluate employment outcomes by the education status, information on education was imputed for rounds 1 and 2, using the information provided for all household members in rounds 3, 4, and 5. This resulted in additional information on the education status for household members in rounds 1 and 2, which was not yet available for earlier analysis of the Kenya COVID-19 RRPS.

For each household, a target respondent is followed throughout all survey waves. All households in the sample were targeted in each round, independent of whether they were reached in a previous round. The only exception was households that explicitly stated that they didn't want to be called again in future rounds. This means, some households were interviewed for the first time after round 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, who 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 household members that no longer lived with the target respondent.

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15 World Bank. 2020. "Socioeconomic impact of COVID-19 in Kenya, on households, round 1."
16 For each enumerator the mean proportion of households without any employment is calculated. For rounds 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 round 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.