

Public Disclosure Authorized

How COVID-19 CONTINUES TO AFFECT LIVES OF REFUGEES IN KENYA

**RAPID RESPONSE PHONE SURVEY
ROUNDS 1 TO 5**

10/16/2021



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Abbreviations

CAPI	Computer Assisted Personal Interview
GoK	Government of Kenya
HH	Household
KCHS	Kenya Continuous Household Survey
KIHBS	Kenya Integrated Household Budget Survey
KNBS	Kenya National Bureau of Statistics
KSh	Kenyan Shilling
NGO	Non-Governmental Organization
pp	Percentage points
RDD	Random Digit Dialing
RRPS	Rapid Response Phone Survey
SES	Socioeconomic Survey
UNHCR	United Nations High Commissioner for Refugees

EXECUTIVE SUMMARY

Understanding the socioeconomic impact of the COVID-19 pandemic on refugees is important to inform targeted policy responses. The arrival of COVID-19 disrupted lives across all countries and communities, creating unprecedented challenges for the world. As of August 2021, there have been more than 200,000 cases in Kenya, with more than 4,000 deaths. In response, the Government of Kenya (GoK) has imposed a range of restrictions to curb the spread of the pandemic. However, this has inadvertently resulted in socioeconomic effects on the population in Kenya, including those in refugee settlements. Data from the Rapid Response Phone Surveys (RRPS) will be essential in providing information to monitor and mitigate the impact of the pandemic. For refugee and surrounding host communities, which span the humanitarian development nexus, this type of data is particularly important as comparatively there is the least data globally for these populations have.

Refugee communities are disproportionately vulnerable to shocks and are facing high food insecurity, low employment opportunities, and adverse impacts on health. The health and economic consequences of pandemics and mitigation measures result in critical socioeconomic effects that can impact populations in a variety of ways. Notably, populations that were already in vulnerable conditions before the crisis, such as refugees, stateless persons, and the host communities directly surrounding the camps, are likely to be most severely affected as their capacity to cope with shocks is limited. Shocks such as the COVID-19 pandemic can exacerbate the already existing problems of high food insecurity, low employment opportunities and health access, thereby also increasing the inequalities between refugees and nationals.

The Kenya COVID-19 RRPS aims to fill socioeconomic data gaps by providing evidence to inform targeted policy and programmatic response. With face-to-face data collection no longer a feasible option due to high infection rates and government restrictions, phone surveys emerged as an alternative for rapid and frequent data collection. The World Bank in collaboration with the Kenya National Bureau of Statistics (KNBS), the United Nations High Commissioner for Refugees (UNHCR) and researchers from the University of California, Berkeley, are implementing Rapid Response Phone Surveys for (i) Kenyan and refugee households, (ii) micro-enterprises run by young entrepreneurs, and (iii) formal enterprises. This note provides findings and makes policy recommendations based on five waves of data collection for Kenyan and refugee households. The RRPS data is unique as it allows to draw a picture of the socioeconomic situation of all major refugee groups in Kenya during the COVID-19 pandemic, covering camp and urban refugees as well as stateless persons in the same as Kenyan nationals. Kenyan nationals residing in urban areas were selected as the comparison group throughout this report, as densely populated areas – such as Kenya’s urban areas and refugee camps – were differently affected by the pandemic and thus this comparison is relatively easily made.

The pandemic resulted in very low employment rates for refugees initially, which have improved over time. Refugees have always faced low levels of employment even before the pandemic, as only 43 percent of refugees in Kalobeyei and 24 percent in Kakuma refugee camp were employed. Even if refugees and hosts had the same demographic characteristics as urban nationals and lived in the same locations, refugees were 34 percentage points less likely to be employed pre-pandemic and would earn less than urban nationals. With the onset of the COVID-19 pandemic, employment rates decreased further and many were pushed out of the labor force with only 1 person out of 10 being employed in the initial months of the pandemic, compared to 4 out of every 10 urban Kenyans. In addition, refugees’ recovery in terms of hours worked, household income and the share employed was slower than that for urban nationals and often stagnant throughout 2020. During a shock such as COVID-19 existing vulnerabilities were therefore aggravated over an extended period. This is true more so for camp refugees who faced a ragged recovery in employment, as compared to urban refugees, where a clear upward trajectory is visible.

Resilience-building in the face of a crisis, such as creating incentives for firms to provide formal jobs to refugees, simplifying procedures to obtain legal documents or easing legal restrictions on the movement of refugee communities, is crucial to ensure that refugees can maintain their livelihoods in times of need.

A year into the pandemic, food insecurity still remains high, especially for camp refugees, making it important to ensure that access to food is secured. Food insecurity disproportionately impacts the refugee population in Kenya. In May-June of 2020 more than 70 percent of camp refugees and 60 percent of urban refugees had members skipping meals at least once in 7 days. While this recovered strongly for urban refugees with 10 percent skipping meals in April-June 2021, it is still a cause of concern for camp refugees (50 percent during the same time period). Access to staple foods has also worsened for camp refugees over the course of the pandemic, while improving for urban refugees. This is in line with the recovery that urban refugees have experienced in employment. Therefore, adequate size and frequency of food aid, in the form of cash transfers, vouchers or in-kind aid needs to be ensured.

Learning was significantly impacted during school closures and any resulting learning gaps need to be adequately addressed. Engagement of refugee children in learning activities was much lower in 2020 as compared to children of nationals living in urban areas. While engagement has increased and is comparable across all groups post school re-openings, more preparation needs to be done to ensure that children continue to have access to education in case of further school closures in the future by investing in the development of content and infrastructure to support remote learning. Moreover, to bridge any learning gaps developed during school closures, emphasis on additional support like extracurricular activities and classes from schools and teachers will be essential. Training teachers to handle and support not only remote-learning but also to provide support needed during school re-openings, should be part of a larger program to ensure that qualified teachers are accessible to children of refugees.

Capacity to provide and safely deliver health services to refugee populations should be expanded. A fifth of camp refugees and a tenth of urban refugees were unable to access medicines when needed in April-June 2021, while only 1 percent of urban nationals faced the same problem. Access to medicines and sufficient capacity of health facilities is particularly crucial in the context of a pandemic, as diseases can spread quickly in the often-overcrowded homes of refugees.

Table 0-1: Recommendations

Recommendation	Comment/Explanation	Time-Period
Continued use of social protection is needed to help mitigate the impact of the pandemic.	It is important that social assistance programs like cash transfers continue for the duration of the pandemic as households continue to be negatively affected in 2021. To address the increase in food insecurity, food vouchers may also be provided to households.	Immediate
More support from schools in the form of extracurricular activities.	To bridge the associated learning gaps developed from school closures, emphasis on extracurricular activities will provide the necessary support for learners who have fallen behind.	Immediate
Capacity to deliver health services, vaccinations and	Access to medicines is comparatively low for refugees as compared to urban nationals. Capacity to deliver medicines to refugees must be expanded through	Immediate

<p>medicines should be expanded.</p>	<p>additional funding for health services. Additionally, people also need to be encouraged to get a COVID-19 vaccination once sufficient doses are available to the public, so that the spread of COVID-19 can be controlled further. Vaccination drives along with easy accessibility of vaccination centers will help ensure that everyone has access to COVID-19 vaccines.</p>	
<p>Simplifying procedures to obtain legal documents and easing restrictions on movement.</p>	<p>Refugees have always been faced with low employment opportunities as compared to nationals. During a shock such as the COVID-19 pandemic, these inequalities have been aggravated leading to slow recovery for refugees. Simplifying procedures to obtain legal documents and easing of restrictions on movement will help them get better access to the labor market.</p>	<p>Medium-term</p>
<p>Greater preparation to ensure educational uptake remains high in case of future school closures.</p>	<p>Participation in learning activity during school closures was very low for refugee children. To prevent this, in case of future school closures, teachers and schools must be given adequate training to provide support for distance learning. Provisional support, such as airtime and mobile data, needs to be provided to teachers and children to expand learning possibilities and help reducing inequality in access to education.</p>	<p>Medium-Term</p>

A. INTRODUCTION

1. Kenya is an important host country for many refugees. Kenya hosts more than 500,000 refugees and asylum seekers, most of which originate from Somalia (54 percent), South Sudan (25 percent), the Democratic Republic of Congo (9 percent), and Ethiopia (6 percent).¹ Most refugees reside in three locations: Dadaab refugee camps in Garissa county (44 percent), Kakuma refugee camp and Kalobeyei settlement in Turkana county (40 percent), and urban areas, mainly in Nairobi county (16 percent).² As more refugees have entered the country, the refugee camps have grown to considerable sizes, together hosting approximately 400 thousand refugees in August 2021.^{3,4} In both counties the camps have developed into commercial hubs of an otherwise semi-arid place with few business opportunities, and have thus grown to fulfil a central cultural, social, and economic role, not only for refugees but also the host community.

2. Refugees are particularly vulnerable to the socioeconomic impacts of the COVID-19 pandemic. Refugees are specifically at risk to the impacts of the pandemic given their displacement related and socioeconomic vulnerabilities, as well as the overcrowding living conditions of their households.⁵ Moreover, compared to nationals, refugees already had worse employment outcomes prior to the pandemic. This is because they lack the required documents to work (specifically work permits), face legal barriers limiting possibilities and are more likely to be involved in informal employment than host communities.^{6,7} Refugees' capacity to build human capital through education may also have eroded as their access to digital learning is limited.⁸ The COVID-19 pandemic and associated restrictions, can thus widen human capital, employment and poverty gaps between refugees and nationals. In this section, findings on socioeconomic impacts of COVID-19 on camp and urban-based refugee communities are presented in comparison to urban nationals.⁹

3. Refugees were subject to the same or more stringent lockdown rules as nationals. In response to the pandemic, the Government of Kenya (GoK) implemented an extensive set of containment measures, including closures of all schools, bars, and in-door restaurants, a ban on international flights, a national dusk-to-dawn curfew, restrictions on public gatherings, limits on public transport passenger capacities and public information campaigns.¹⁰ These measures were effective in all of Kenya from the day they were implemented, including in refugee camps. In addition to social distancing rules and other containment measures, camps were briefly closed off from the outside in 2020, making it very hard to travel outside refugee camps and settlements, especially for business reasons. Even though some containment measures were subsequently lifted, Kenya has consistently had more stringent policies in place compared to other countries in Sub-Saharan Africa as measured by the Oxford stringency index.¹¹

¹ UNHCR, "Kenya: Registered Refugees and Asylum-Seekers. December 2020."

² UNHCR and World Bank, "Understanding the Socioeconomic Conditions of the Stateless Shona Community in Kenya: Results from the 2019 Socioeconomic Assessment Survey, Forthcoming."

³ UNHCR, "Kakuma Refugee Camp and Kalobeyei Integrated Settlement."

⁴ UNHCR, "Dadaab Refugee Complex."

⁵ Three (3) or more household members per habitable room (COVID-19 updates, Sub Office Kakuma UNHCR, COVID-19 updates, Sub Office Kakuma, 8 May 2020). UN-Habitat defines it as the situation where five (5) members or more are sleeping in the same habitable room.

⁶ UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Turkana West, Kenya: Results from the 2019 Kakuma Socioeconomic Assessment Survey, Forthcoming."

⁷ UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kalobeyei, Kenya: Results from the 2018 Kalobeyei Socioeconomic Profiling Survey, 2018."

⁸ UNHCR, "The Impact of COVID-19 on Refugee Education."

⁹ While the Kenyan population living directly around the camp is at least as vulnerable as the refugees, the data we have in the RRPS does not allow to say anything about the core host community living directly around the camps

¹⁰ World Bank. 2021. *Socioeconomic Impacts of Covid-19 in Kenya*.

¹¹ World Bank. 2021. *Socioeconomic Impacts of Covid-19 in Kenya*.

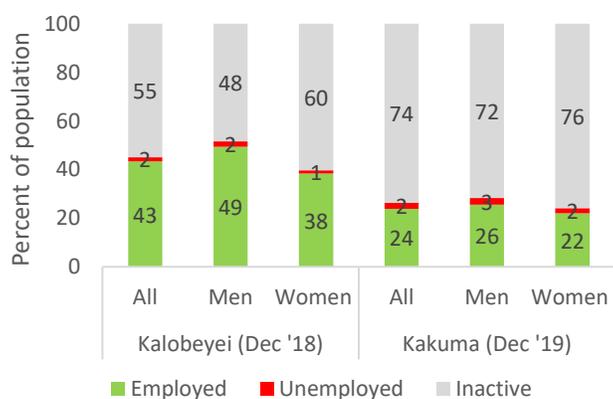
4. Refugees primarily live in urban areas as well as densely populated refugee camps and are therefore more easily comparable to urban nationals. The refugee sample of this analysis consists of three groups of refugees i) refugees living in urban areas primarily Nairobi; ii) refugees living in Kakuma and Kalobeyi camps in Turkana county and iii) refugees living in Dadaab refugee camp in Garissa county. We label group i) urban refugees and groups ii) and iii) as camp-based refugees. While camp-based refugees live in remote, sparsely populated counties with a large concentration in agriculture, decades of immigration lead the camps themselves to grow into large urbanized areas hosting more than 200,000 refugees each. Available job-market opportunities and labor-market dynamics are therefore more readily compared to the dynamics in Kenyan cities instead of the dynamics present in rural areas. As refugees also do not have a formal right to own land and by consequence cannot engage in agriculture, a comparison with rural nationals who are largely agriculture-reliant could be misleading when interpreting the impacts of the COVID-19 pandemic. For these reasons, we compare urban and camp-based refugees to urban nationals in this analysis. Further results on Kenyan nationals, including those residing in rural areas can be found in the World Bank report on the socioeconomic impact of COVID-19 in Kenya.

B. LIVELIHOOD IMPACTS, COPING STRATEGIES AND FOOD INSECURITY

1. Employment

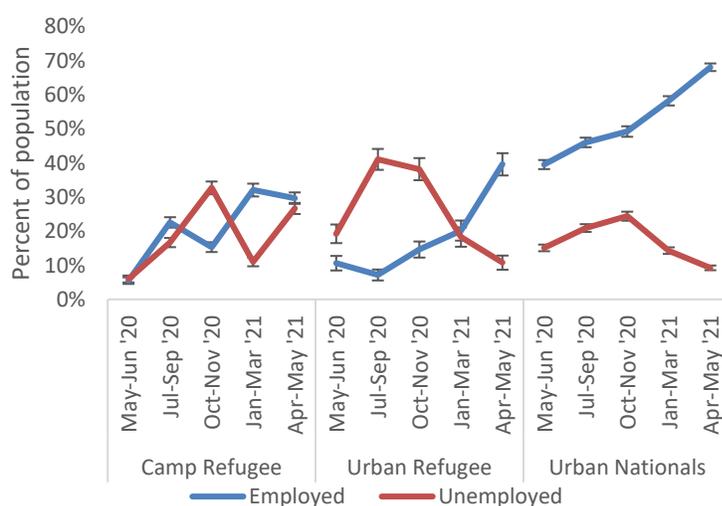
5. Employment declined sharply for the refugee population in Kenya in the early months of the pandemic but improved in recent months. A lack of documentation (work permits) and restrictions on movements have restricted employment opportunities for refugees even prior to the COVID-19 pandemic.¹² With the onset of the COVID-19 pandemic, the situation worsened. Employment declined from almost half the working age population in Kalobeyei and a quarter in Kakuma to 6 percent for all camp-based refugees in May-June 2020 (Figure B-1 and Figure B-2). At the same time, many were pushed out of the labor force, resulting in 88 percent of camp-based and 70 percent of urban refugees being inactive in May-June 2020.¹³ Employment rates remained low until the last months of 2020 while unemployment rate increased to 33 percent for camp and 38 percent of urban refugees. Recently employment rates improved to 30 percent for camp-based and 40 percent for urban refugees in April-June 2021. While encouraging, the share of working camp refugees was smaller than in January-March 2021 and unemployment rates increased from 11 to 27 percent over the same period. Since neither urban refugees nor urban nationals were affected over the same period, it will be important monitor whether the downward trend for camp-based refugees continues. In addition, there remains a large level-gap in employment levels relative to urban nationals, as 68 percent were employed in April-June 2021 which is 38 percent more than camp refugees and 28 percent more than urban refugees in the same period.

Figure B-1: Camp-based refugees' labor force status before the COVID-19 outbreak (18-64 years)



Source: Kalobeyei SES (2018); Kakuma SES (2019).

Figure B-2: Labor force status after the COVID-19 outbreak (18-64 years)



Source: Kenya COVID-19 RRPS.

6. Refugees were significantly less likely to be employed even before the pandemic and these inequalities are likely to be exacerbated by the slower recovery after the COVID-19 shock. Even if refugees had the same demographic characteristics as urban nationals and lived in the same locations,

¹² 24 percent of refugees were employed in Kakuma in 2018 and 43 percent in Kalobeyei in 2019. Numbers in this report are based on the 18–64 years old population and may differ from statistics on the 14–64 age group considered in the SES publications.

¹³ Inactive or out of labor force refers to that part of the population that is neither employed in any type of employment activity (including self-employment) and is not actively searching for work/employment.

they are 34 percentage points less likely employed before the pandemic than urban nationals (Figure B-3 Table B-1).¹⁴ With the onset of COVID-19, the initial difference narrowed in the first months due to a relatively larger drop in the share of employed urban nationals. However, after October-November 2020 employment rates of urban nationals recovered at a quicker rate, such that in April-June 2021, even if refugees had the same demographic characteristics and lived in the same location, only a third were employed compared to more than two thirds of urban nationals.

Figure B-3: Employed

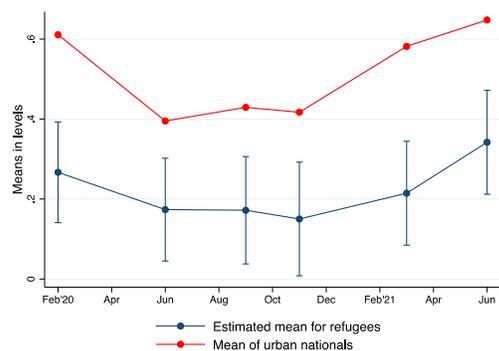
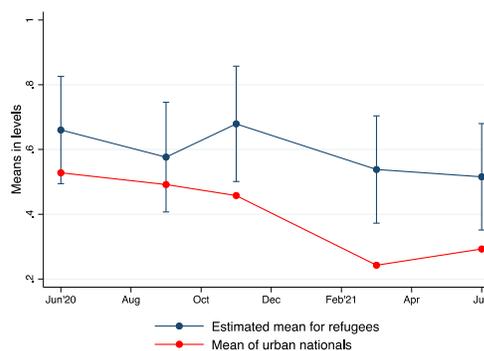


Figure B-4: Work stoppage rate



Source: Kenya COVID-19 RRPS.

Note: Mean for urban nationals and estimated mean for refugees, controlling for demographics and location

Table B-1: Regression results controlling for demographics and location

	Employed			Work stoppage rate		
	Raw mean nationals [CI]	Estimated difference [p-value]	Exp. mean refugees [CI]	Raw mean nationals [CI]	Estimated difference [p-value]	Exp. mean refugees [CI]
	(1)	(2)	(1) + (2)	(3)	(4)	(3) + (4)
February 2020	0.611 [0.58;0.64]	-0.344*** [0.000]	0.267 [0.14;0.39]	. [.]	. [.]	. [.]
May-Jun 2020	0.395 [0.36;0.43]	-0.222*** [0.001]	0.173 [0.04;0.30]	0.528 [0.48;0.57]	0.132 [0.118]	0.660 [0.49;0.83]
Jul-Sep 2020	0.429 [0.39;0.47]	-0.257*** [0.000]	0.172 [0.04;0.31]	0.492 [0.44;0.54]	0.085 [0.328]	0.576 [0.41;0.75]
Oct-Nov 2020	0.417 [0.38;0.46]	-0.267*** [0.000]	0.150 [0.01;0.29]	0.458 [0.41;0.51]	0.221** [0.015]	0.679 [0.50;0.86]
Feb-Mar 2021	0.582 [0.54;0.62]	-0.367*** [0.000]	0.214 [0.08;0.34]	0.243 [0.20;0.28]	0.296*** [0.000]	0.538 [0.37;0.70]

¹⁴ An estimated mean for refugees is taken on the premise that they have the same demographic characteristics and live in the same locations as urban nationals. The estimated mean is calculated in two steps. First, by estimating the difference between refugees and urban nationals for each period, controlling for education, sex, gender, respondent, and county fixed effects (specifications (2) and (4) in Table B-1). Second, summing the estimated per-period difference and the per-period raw mean for urban nationals (specifications (1)+(2) and (3)+(4) in Table B-1). To ensure sufficient statistical power, we pool the camp and urban refugee subsamples. The upper and lower bounds in Figures B-4 and B-5 depict the confidence intervals of the estimated difference.

Apr-Jun 2021	0.648 [0.61;0.68]	-0.306*** [0.000]	0.342 [0.21;0.47]	0.293 [0.25;0.33]	0.223*** [0.008]	0.516 [0.35;0.68]
Demographics	No	Yes	Yes	No	Yes	Yes
County FE	No	Yes	Yes	No	Yes	Yes
N (pooled waves)	34,172	52,715	52,715	17,918	20,612	20,612

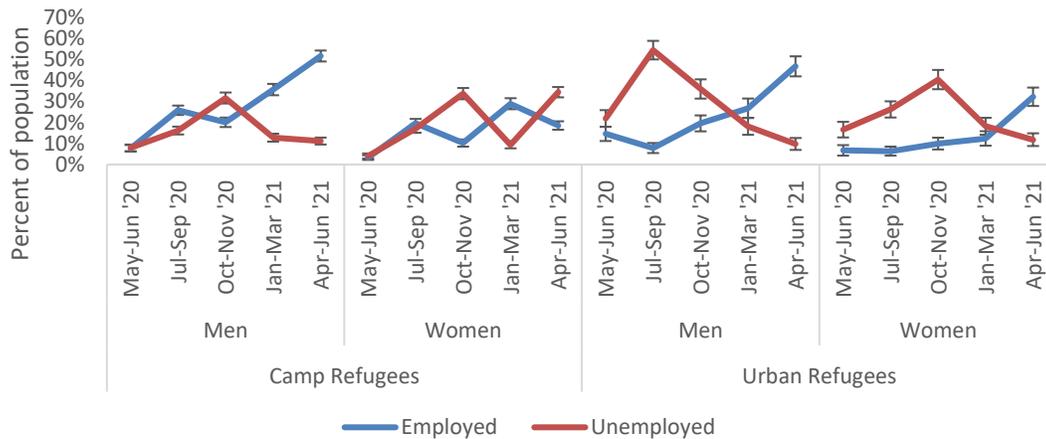
Source: Kenya COVID-19 RRPS.

Note: Controls include age, gender, educational attainment, respondent-status, and county fixed effects. Standard errors clustered at the household level. Confidence intervals and p-values in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

7. Refugees that were employed before the outbreak were as likely to have stopped working as urban nationals in the first five months of the pandemic, but significantly more likely to not be working thereafter. In the first months after the outbreak of COVID-19, work stoppage rates were high and comparable for both the refugee and the Kenyan population (Figure B-4). However, after the gradual lifting of restrictions in fall 2020, the stoppage rate for refugees persisted above 50 percent while urban nationals improved significantly since October-November 2020, even after we control for demographics and location. In April-June 2021 only 29 percent of urban nationals who were employed in February 2020 were not employed at the time of interview compared to a staggering 52 percent of refugees. These results suggest that irrespective of education, age, gender, location, or previous work experience, re-entering the labor market was not straightforward for refugees, leading to a slow and stagnant recovery of employment rates.

8. The recovery of employment for women has been slower than that for men in refugee communities. Employment among refugee women is much lower with only 19 percent of women in camps being employed in April-June 2021 compared to 52 percent of men in the same period (Figure B-5). While more women (in camp refugee households) are employed in April-June 2021 as compared to the early months of the pandemic, the recovery has been slow and often ragged. In contrast, employment rates for men recovered consistently since October-November 2020 and in recent months more men were working than in any period before. For urban refugees, both men and women experienced an improvement in employment since July-September 2020 but the rate of recovery for men was larger than for women. While the employment rates were similar for men and women in July-September 2020 (7 and 6 percent respectively), 47 percent of men were employed in April-June 2021 which compares to only 32 percent of women in the same period. In addition, most of the recovery for urban refugee women occurred only in the last period; before April 2021, less than 1 in 8 women were employed in any given survey round.

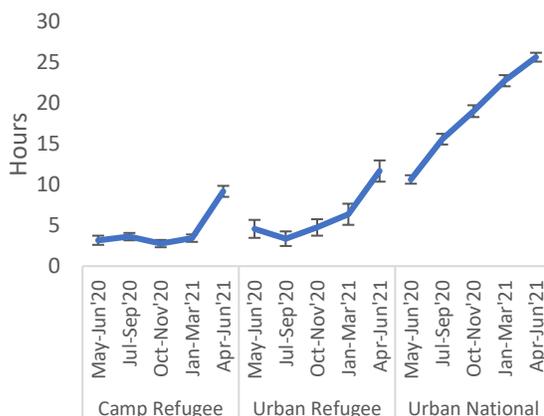
Figure B-5: Labor force status by gender (18-64 years)



Source: Kenya COVID-19 RRPS.

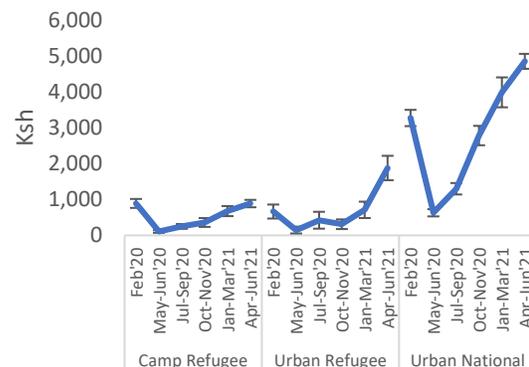
9. Hours worked for refugees have been very low and mostly stagnant throughout 2020 but have improved in recent months. At the beginning of the pandemic, when the economy came to a standstill and most refugees did not work (Figure B-2), average working hours fell to negligible levels. For urban nationals, hours improved from June 2020 onwards, while for both urban and camp-based refugees the path to recovery was much less clear. In February-March 2021, 10 months after the beginning of the pandemic, camp refugees continued to work the same number of hours as in May-June 2020 while urban refugees increased their labor supply by less than 2 hours over the same period (Figure B-6). By contrast, urban Kenyans more than doubled their average hours, from 11 hours in May-June 2020 to 23 hours in January-March 2021. Only in recent months have hours worked improved significantly for refugees, but they remain below the level worked by urban nationals.

Figure B-6: Hours worked by workers (last 7 days)



Source: Kenya COVID-19 RRPS.

Figure B-7: Household income per capita (last 14 days)



Source: Kenya COVID-19 RRPS

10. Earnings have improved for refugees in 2021, but recovery has been slow and refugees continue to earn significantly less than nationals. Earnings for refugees also improved, with household incomes reaching pre-pandemic levels for both camp and urban-based refugees in mid-2021, after falling to negligible levels in the beginning of the pandemic (Figure B-7). Most of the improvements happened only in recent months, whereas throughout most of 2020 refugee incomes remained at worryingly low levels. Despite the improvement, urban and camp refugees still earn significantly less than their national counterparts. In April-June 2021, average household incomes were 4,851 Ksh for urban nationals but only 887 Ksh for camp-based and 1,878 Ksh for urban refugees. Continuously low-income levels coupled with a slow and often stagnant recovery in the labor-market (Figures B-4 and B-5) highlight the fragile job-market situation refugees face. As refugees do not have a universal legal right to work in Kenya and frequently lack the required documentation to acquire work permits, they are especially vulnerable during times when job markets are tight. It is therefore crucial to build resilience among refugees and remedy existing frictions in the labor market.

2. Non-labor Income

11. Camp-based refugees can more easily rely on support from outside the household, though cuts in aid received may be worrisome. At the beginning of the pandemic, 15 percent of urban refugees received some form of support from outside the households compared to 8 percent of urban nationals (Figure B-8). In contrast, camp-based refugees receive regular aid distributions from UNHCR and WFP. However, due to funding shortfalls for the WFP, the food assistance provided has reduced in size and frequency from refugees receiving aid monthly, to now receiving it once in two months. More than 400,000 refugees faced cuts in food rations by over 40 percent in March 2021, which may decrease further by the end of 2021.^{15,16} Despite this, the largest part of support to camp-refugees is from NGOs and other aid agencies, with 38 percent of households receiving support in April-June 2021 (down from 46 percent in the initial months of the pandemic).¹⁷ Similarly, the share receiving government support has fallen from 40 percent in May-June 2020 to 8 percent in recent months. Both declines are marginally offset by an increase in remittances from 4 percent to 18 percent over the same period, putting camp-based refugees at a potential risk of food insecurity.

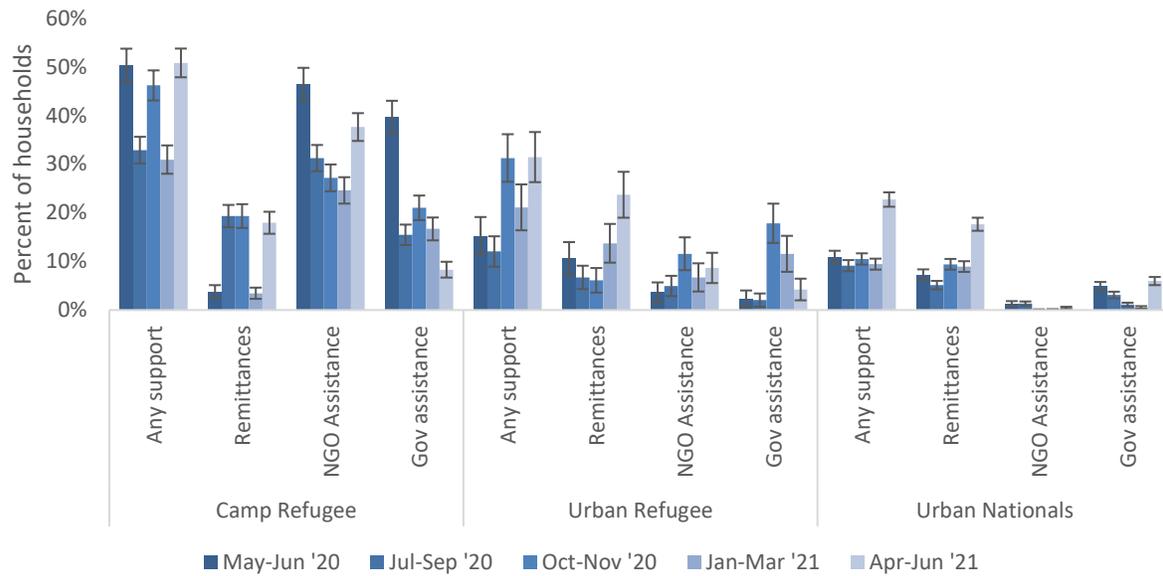
12. When urban refugees receive support, it is primarily through remittances. The share of urban refugee household receiving any support has increased over the course of the pandemic, with the largest contribution coming from a significant increase in remittances (from 11 to 24 percent). That said, the share of households receiving government aid fell from 18 percent in October-November 2020 to 4 percent in April-June 2021, which poses a special risk to the urban refugee population who cannot rely on the universal support structures of NGOs and other aid agencies. The share of urban national households receiving NGO support is comparatively small (less than 1 percent in April-June 2021). However, the share of households receiving government support, while small, increased recently from 1 percent in October-November 2020 to 6 percent in April-June 2021. The primary source of assistance for urban nationals is remittances, as the share of households receiving them increased to 18 percent in April-June 2021 from 7 percent in the same period one year earlier.

¹⁵ UNHCR, "WFP, UNHCR Appeal for Funding for over 3 Million Refugees Hit by Ration Cuts in Eastern Africa."

¹⁶ WFP, "WFP Institutes Further Cuts on Food Rations for Refugees in Kenya as Funds Dry Up."

¹⁷ Registered refugees in camps receive a monthly (or now once in two months) ration from the WFP. The RRPS asks respondents if they received any such aid in the past 2 weeks and the findings show that the share of those receiving aid is less than 100 percent. This is an average value over the 2-month period of data collection.

Figure B-8: Assistance received by households



Source: Kenya COVID-19 RRPS.

3. Coping Strategies

13. Most refugees had to implement at least one coping strategy in response to COVID-19, with many reducing their food consumption. More than 8 in 10 refugees had to adopt at least one coping mechanism in April-June 2021. This is similar to urban national households where a little less than 9 in 10 were using at least one coping mechanism during the same period (Figure B-9). The most adopted strategy across all refugee groups is reducing food consumption, followed by reducing non-food consumption for urban refugees. An increasing fraction of camp refugees relied on credit purchases (41 percent) to cover their needs (Figure B-10). This trend is particularly alarming given the already high levels of indebtedness in refugee households before the pandemic.¹⁸ The same trend can also be observed for urban refugees where the share of households relying on credit purchases has increased since July-September 2020 and reached 22 percent in April-June 2021 (Figure B-11).

¹⁸ For example, 89 percent of households in Kalobeyi rely on credit from their retailers to finance nutritional needs. Sterck et al., “Cash Transfer Models and Debt in the Kalobeyi Settlement. See Sterck, O., Rodgers, C., Siu, J., Stierna, M. F., and Betts, A.”

Figure B-9: Households using any coping strategies

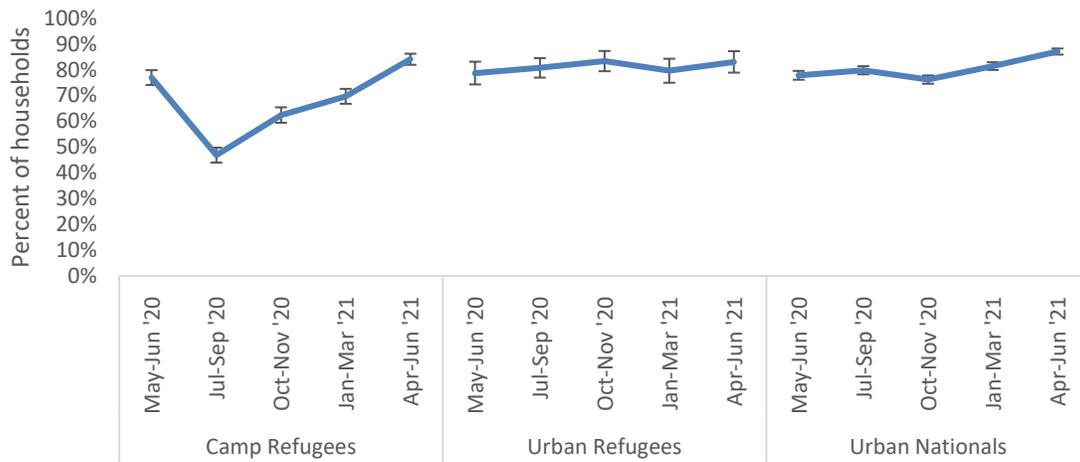


Figure B-10: Top 5 coping strategies employed by camp refugees

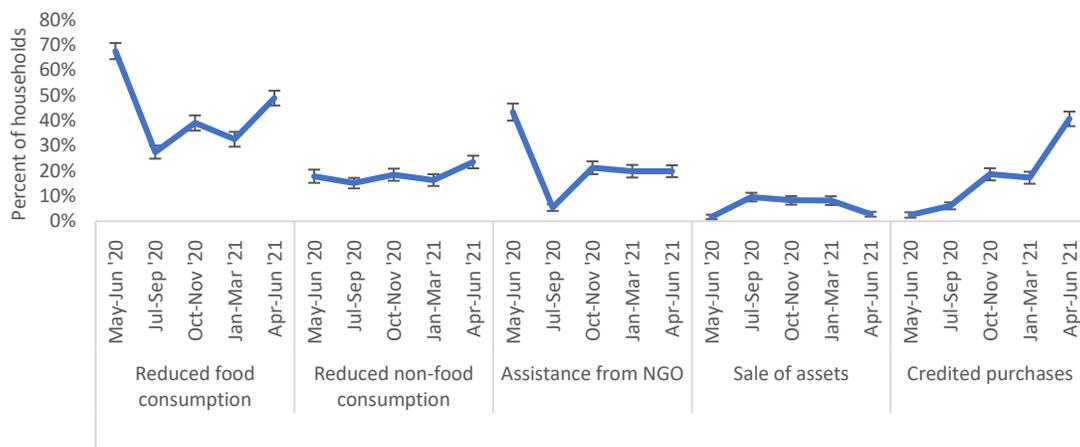
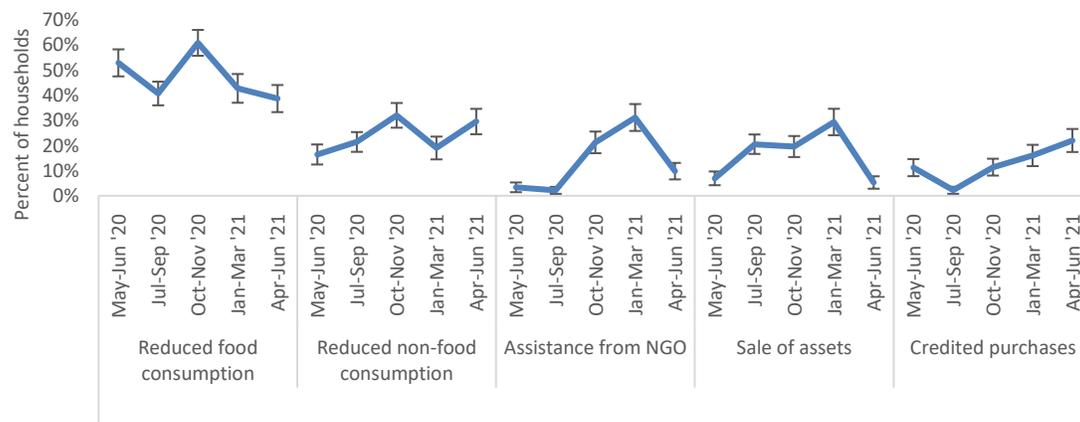


Figure B-11: Top 5 coping strategies employed by urban refugees

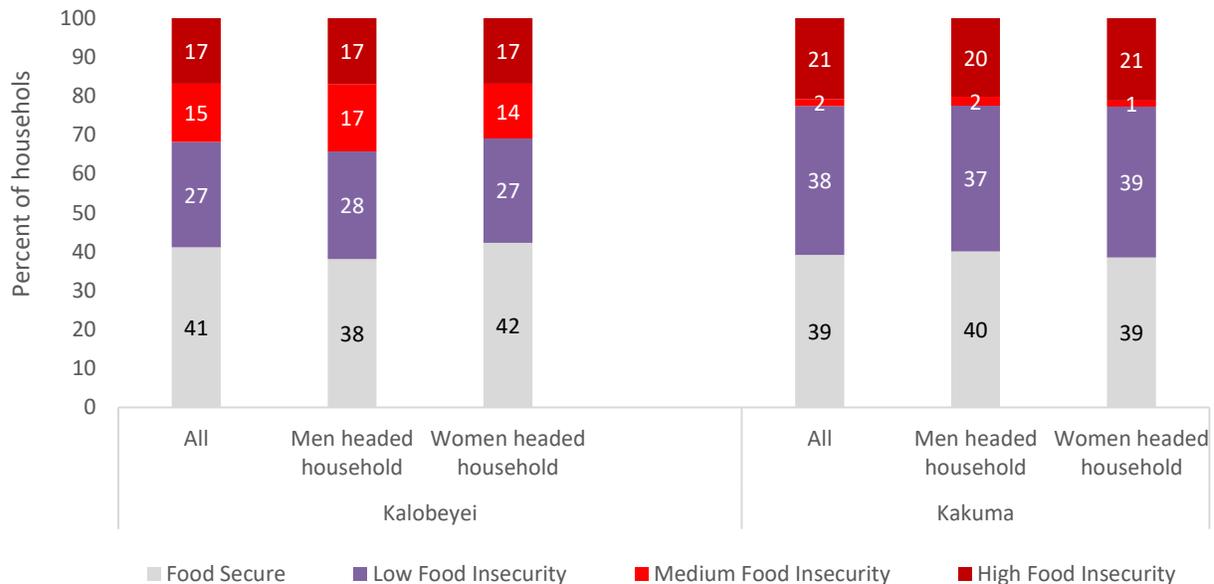


Source: Kenya COVID-19 RRPS.

4. Food Security

14. Prior to the COVID-19 pandemic, about one in five refugee households living in Kakuma and Kalobeyei reported high food insecurity. After the post-electoral violence of 2008, over 10 million people in Kenya were recognized as having no access to food in the right amounts and quality (food insecure).¹⁹ While the majority of refugees nowadays are living on food relief, the regular droughts faced by Turkana county since early 2016 have left another 300,000 people in critical need of food assistance to survive. Turkana is the most food insecure county of Kenya with 86 percent of households not having had enough food or money to purchase food in 2016.²⁰ Between 2018 and 2019, 6 in 10 refugee households of Kalobeyei and Kakuma were food insecure. The share of severe food insecure households was large in both camps with 17 percent of households in Kalobeyei and 21 percent in Kakuma scoring in the highest category on the food insecurity scale (Figure B-12).²¹ Across the highly food insecure group there was no significant difference across female and male headed households.

Figure B-12: Pre-COVID-19 food insecurity levels by household head gender



Source: Kalobeyei SES (2018) and Kakuma SES (2019)

15. Food insecurity remains high among camp-based refugees as many skip meals due to lack of food. Among camp-based refugees the share of households where adults had to skip a meal at least once in the past week has been on an upward trajectory since July-September 2020, reaching 48 percent in April-June 2021 (Figure B-13). In contrast, 51 percent of urban refugees reported that adults skipped meals at least once in the last 7 days in July-September 2020, but the numbers subsequently decreased to 18 percent in April-June 2021. Over the course of the pandemic, children also faced high food insecurity, with camp-based refugees being hit the worst. In 61 percent of camp-based households children had to

¹⁹ UNHCR & World-Bank, Understanding the Socioeconomic Conditions of Refugees in Turkana West, Kenya: Results from the 2019 Kakuma Socioeconomic Assessment Survey, forthcoming and Kalobeyei 2018 SEP survey UNHCR, Kalobeyei 2018 SEP survey, 2018.

²⁰ World Food Program, "Comprehensive Food Security and Vulnerability Analysis (CFSVA) Kenya."

²¹ Food insecurity was measured based on the Livelihood Coping Strategy Index (LCSI).

skip a meal at least on one day in the past week at the onset of the pandemic, while the situation was better for urban refugees (24 percent) and urban nationals (23 percent) (Figure B-14). In April-June 2021 the share of households where children had to skip a meal at least once in the past 7 days fell to 8 percent for camp-based refugees, 5 percent for urban refugees and 6 percent for urban nationals.

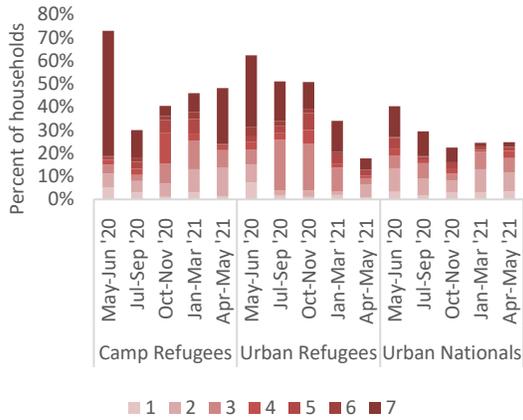
16. Access to staple foods was often compromised during the pandemic. Almost half of the refugee population was unable to access staple foods in October-November 2020, while 1 in 5 urban nationals were unable to access staple foods (Figure B-15). In April-June 2021 access improved for urban refugees but worsened for camp refugees with 21 and 45 percent not being able to access staple foods, respectively.²² The latter is particularly worrying and likely connected to reductions in food rations distributed by WFP which has been in effect since September 2020. A decrease in food rations received from WFP for over 400,000 refugees as funds dwindle²³, makes it even more important to secure alternative sources of income and food for refugees, for example through creating livelihood opportunities.²⁴ Even before the pandemic, a high proportion of the population had no access to food in the right amounts and quality due to regular droughts, floods and damage on crops among others. Low food security in normal times is exacerbated during the pandemic, as even fewer are able to work to earn a livelihood.

²² The RRPS data is collected over a period of 2 months per wave, which currently covers a full food distribution cycle in camps. The statistics presented here reflect the average value across the cycle.

²³ UNHCR, "WFP, UNHCR Appeal for Funding for over 3 Million Refugees Hit by Ration Cuts in Eastern Africa."

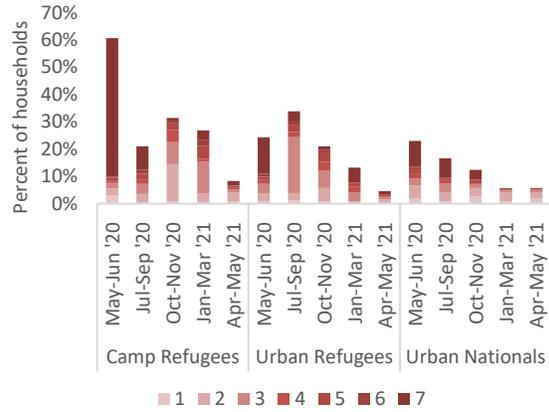
²⁴ World Food Programme, "WFP Warns of Critical Food Shortages for Refugees in Kenya."

Figure B-13: Number of days adults skipped meals in the last 7 days



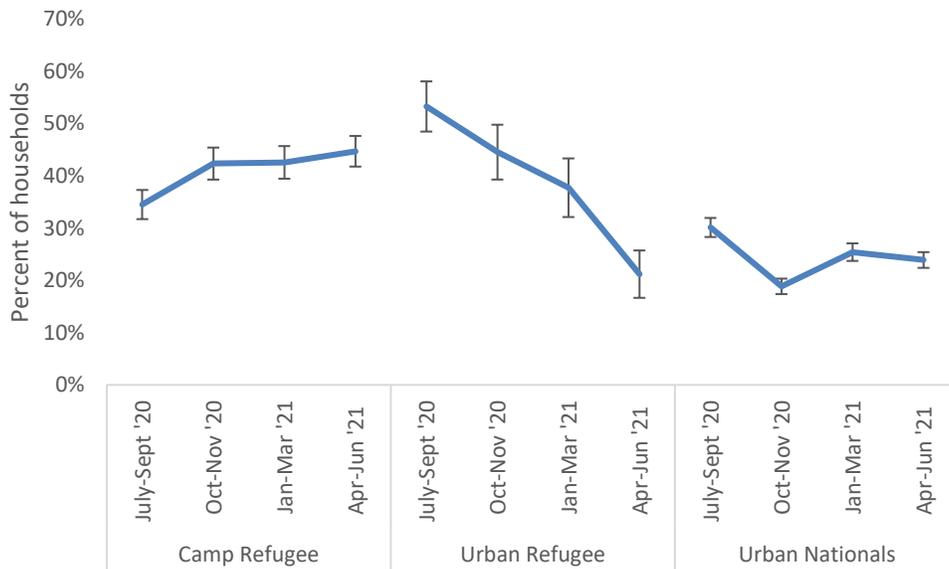
Source: Kenya COVID-19 RRPS.

Figure B-14: Number of days children skipped meals in the last 7 days



Source: Kenya COVID-19 RRPS.

Figure B-15: Not been able to access staple food (past 30 days)



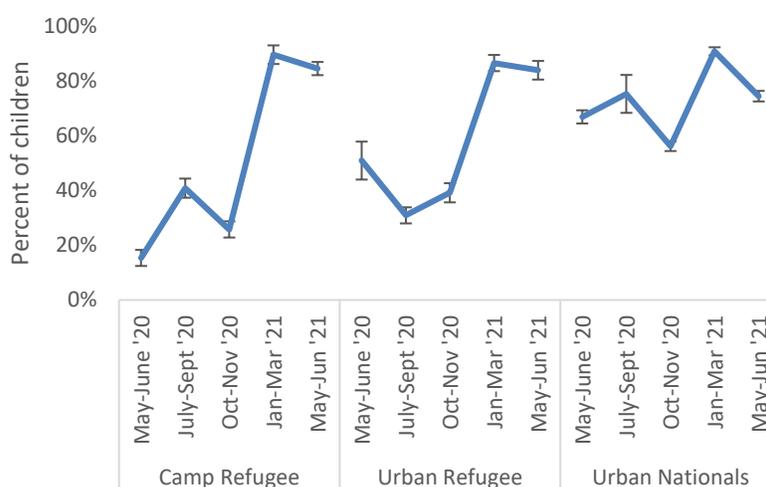
Source: Kenya COVID-19 RRPS

C. HUMAN CAPITAL: EDUCATION AND HEALTH

1. Education

17. Engagement in learning activities was low among refugee groups at the beginning of the pandemic but improved in recent months. Only 15 percent of children in camp-based and 51 percent of children in urban refugee households were engaged in any form of learning activity at the beginning of the pandemic when schools were closed (Figure C-1). In contrast, 67 percent of urban Kenyan children were engaged in learning over the same period. After schools re-opened in January 2021, learning engagement improved and 89 percent of children among camp-based refugees and 86 percent among urban refugees were engaged in some form of learning which is similar to the engagement of nationals (90 percent). Post school holidays in April 2021, engagement in learning has remained comparable to early 2021 for refugee groups with 84 percent of children participating in learning activities. There has been a comparatively higher fall among children in urban Kenya, with 74 percent engaging in learning in May-June 2021. Throughout the course of the pandemic, engagement levels have been higher for urban Kenyan children, as compared to refugees, but with school re-openings, they have become comparable. It will now be crucial that children receive adequate support from schools, for example in the form of remedial educational programs, to bridge any learning gaps that might have occurred during duration of closures. This support needs to be complemented with improvements in the quality of camp service delivery, including having qualified teachers and learning material.

Figure C-1: Children engaged in learning activity



Note: Period of school holidays (from March 29 to May 17, 2021, including a seven-day buffer) has been excluded from this analysis. Children under the age of 3 are excluded from the sample.

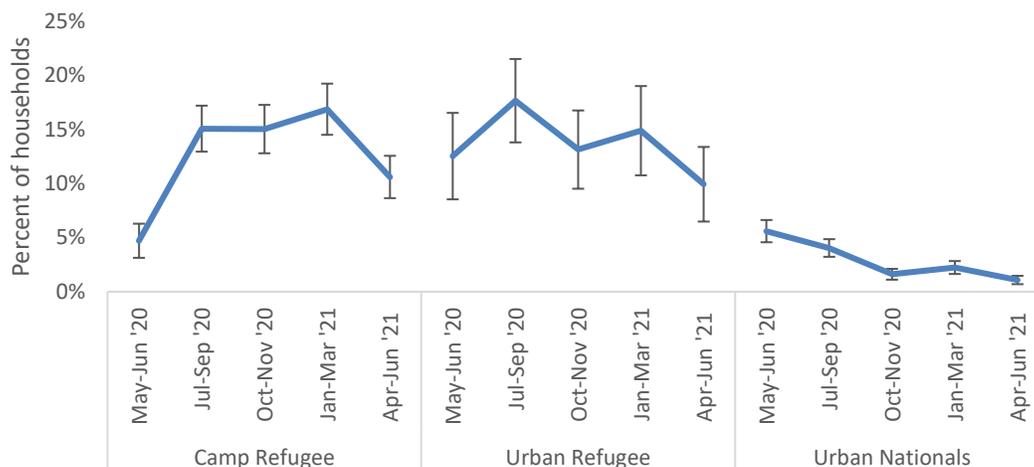
Source: Kenya COVID-19 RRPS.

2. Health

18. Since the beginning of the pandemic, many refugees are unable to access the medicines they need. In the first months after the start of the pandemic 5 percent of camp-based refugees and 13 percent of urban refugees were unable to access the medicines they needed (Figure C-2). For camp-based

refugees, the share of households not being able to access medicines worsened until January-March 2021 and slightly improved in the past months to 11 percent in April-June 2021. Within the same period, the share remained relatively constant for urban refugees and has recently fallen to 10 percent in April-June 2021. These numbers are still significantly above the numbers for urban nationals, among whom close to no households (below 1 percent) experienced issues with accessing medicines within the same period.

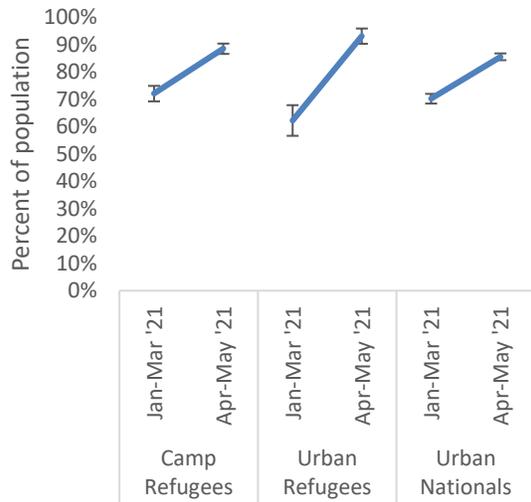
Figure C-2: Unable to access medicines



Source: Kenya COVID-19 RRPS.

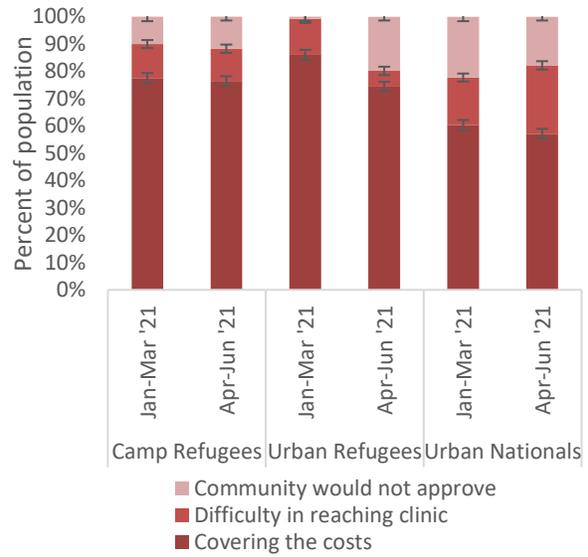
19. 9 out of 10 refugees are willing to take a vaccine if available at no cost, but most feel that covering the costs is the main hurdle to vaccination. For camp-based refugees, 89 percent would agree to get vaccinated if a vaccine was offered to them at no cost while for urban-refugees the number is slightly higher, at 93 percent (Figure C-3). The numbers are a positive improvement from January 2021, when only 72 percent of camp-based and 62 percent of urban refugees were willing to take a vaccine. Most urban nationals are also willing to take a vaccine. However, three-quarters of camp and urban refugees feel that the main hurdle they face in accessing the vaccine is covering the costs. In April-June 2021, 12 percent of camp refugees also feel that they face some difficulty in reaching the clinics, while 20 percent of urban refugees feel that the community would not approve. There needs to be better information dissemination among refugees, informing them of the availability of free of costs vaccines.

Figure C-3: Agree to take COVID-19 vaccine if available at no cost



Source: Kenya COVID-19 RRRPS.

Figure C-4: Main challenge in accessing vaccination



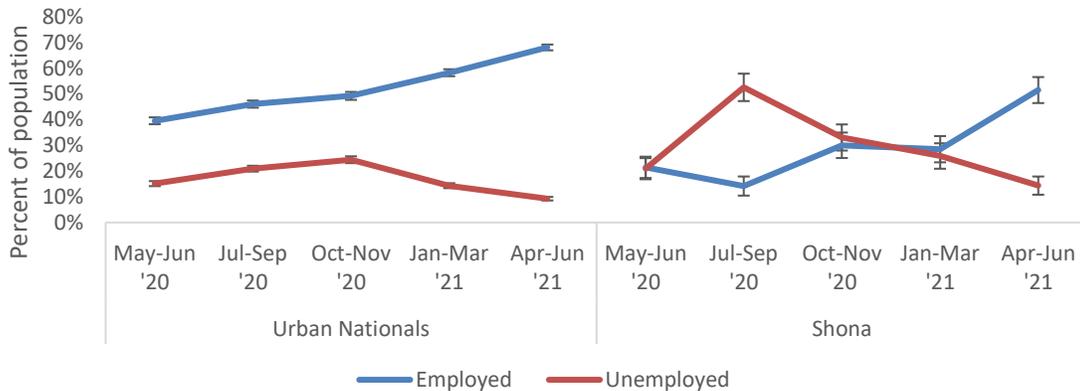
Source: Kenya COVID-19 RRRPS.

Box 1: COVID-19 impacts on the Shona community

Kenya is home to 1,670 individuals from the Shona community who were previously stateless before receiving citizenship on December 12, 2020.²⁵ In 2020 an estimated 18,500 stateless people lived in Kenya. Among them 1,670 belong to the Shona community who mostly originate from Zimbabwe and reside in urban centers in Nairobi as well as in neighboring Kiambu counties. This policy note covers the Shona community for which a comprehensive baseline socioeconomic survey exists that was used as a baseline and allows for a comparison with Kenyan nationals.

The labor market situation of the Shona community worsened sharply since the outbreak of the pandemic. Pre-pandemic employment rates for the Shona were comparable to urban nationals. 73 percent were employed and 2 percent unemployed in May-July 2019 which compares to a 71 percent employment and 4 percent unemployment rate for urban Kenyans in the last quarter of 2019.^{26,27} In May-June 2020 employment among the Shona dipped to 21 percent while the share of unemployed who were actively seeking employment increased to 20 percent, suggesting that the share not participating in the labor market increased by 34 percentage points compared to one year ago (Figure C-4). In recent months, the situation improved, and many members of the Shona community managed to find employment or resume self-employed activities. Yet the numbers still lie below their pre-pandemic levels and the large share of individuals remaining outside the labor force (34 percent) highlight the long-lasting adverse effect of the pandemic on this already vulnerable community.

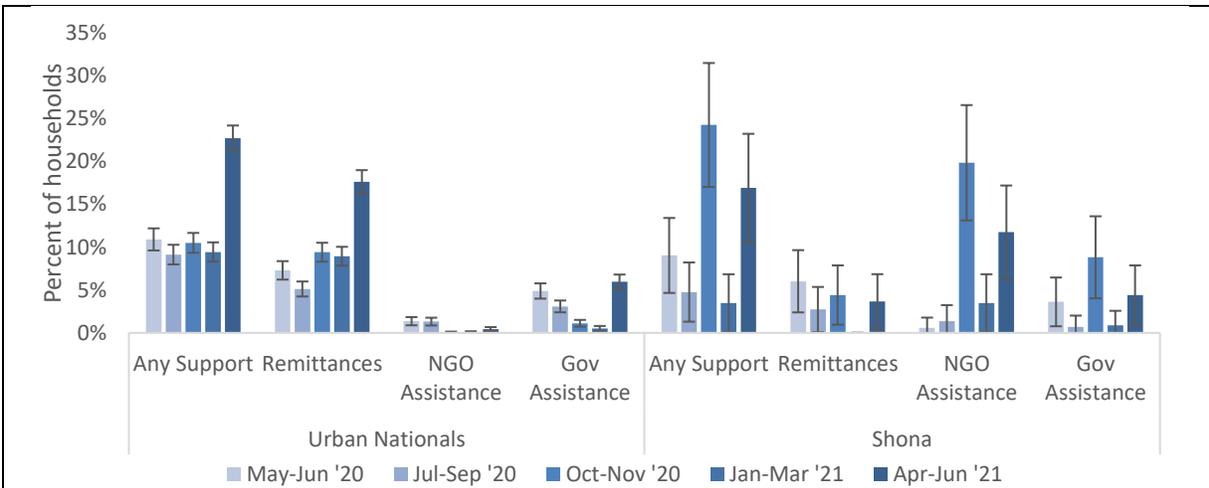
Figure C-5: Labor force status after the COVID-19 outbreak (18-64 years)



Source: Kenya COVID-19 RRPS.

Few members of the Shona community can rely on external assistance in times of need. The overall share of Shona households receiving support from outside their household is small, with only 17 percent reporting receiving any assistance in April-June 2021 (Figure C-5). This is smaller than for any of the refugee groups (51 percent for camp-based and 31 percent for urban refugees) or urban nationals (23 percent) within the same period. At the beginning of the pandemic, when many lost employment, only 9 percent of Shona households received any external support. Assistance from governments and NGOs was particularly limited, with less than 4 in 100 households receiving support from these sources in May-June 2020. In contrast to refugees or urban nationals, the percentage of Shona households who were able to rely on remittances also remained small throughout the pandemic. Since Shona households are on average larger and have more dependents than urban Kenyan households, the lack of assistance is especially worrying and translates into a heightened risk of food insecurity.

Figure C-6: Assistance received by households

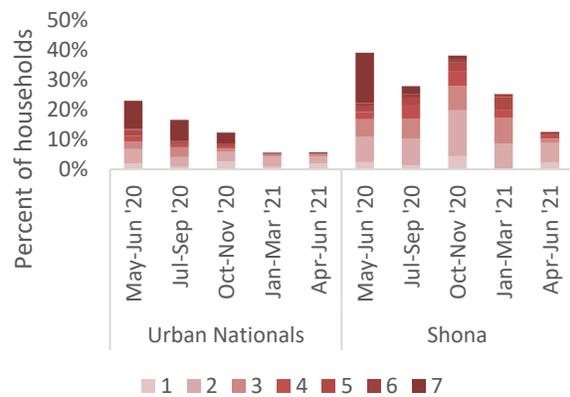
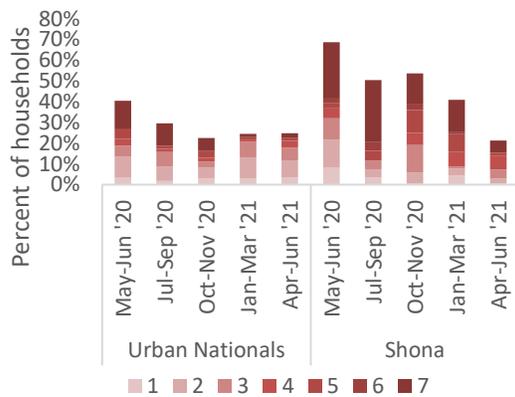


Source: Kenya COVID-19 RRPS.

Most Shona households experienced food insecurity at the beginning of the pandemic. In May-June 2020, an alarming 67 percent of households reported that adults had to skip a meal at least on one day in the past week (Figure C-6). This share remained persistently high over the next five months to the point where still more than half of households reported adults had to skip a meal at least once a week in October-November 2020. In April-June 2021, numbers improved to 17 percent. Children also faced food insecurity at the beginning of the pandemic with 39 percent of households reporting that children had to skip a meal at least on one day in the past week in May-June 2020 (Figure C-7). Similar to adults, this share remained persistently high well into October-November 2020 and improved subsequently, with 14 percent of households reporting children had to skip a meal on at least one day in the past seven days in April-June 2021.

Figure C-7: Number of days adults skipped meals in the last 7 days

Figure C-8: Number of days children skipped meals in the last 7 days



Source: Kenya COVID-19 RRPS.

²⁵ "The term 'stateless person' means a person who is not considered as a national by any State under the operation of its law" according to the Article 1 of the 1954 Convention relating to the Status of Stateless Persons.

²⁶ Data on the Shona from UNHCR, "Understanding the Socioeconomic Conditions of the Stateless Shona Community in Kenya: Results from the 2019 Socioeconomic Survey," 2020.

²⁷ Data on nationals from the 2019 Kenya Continuous Household Survey.

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D. ANNEX: DETAILED METHODOLOGY

1. Design and Survey Instrument

1. The Kenya COVID-19 RRPS for households, is structured as a bi-monthly panel survey that monitors the socioeconomic impacts of the pandemic on nationals, refugees and stateless people. The same respondents are interviewed every two months, along with some new households between May 2020 and June 2021. Respondents can be interviewed in a language they are comfortable with as the questionnaire is translated to Swahili, Luo, Arabic, French, Kirundi, Luganda, Oromo, Somali, Kinyarwanda, Tigrinya, Nuer and Dinka.

Table D-1: sample Size

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Data collection	May 14 to July 7, 2020	July 16 to September 18, 2020	September 28 to December 2, 2020	January 15 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.

2. 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.²⁸ 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, child labor, subjective well-being, knowledge of COVID-19, changes in behavior in response to the pandemic, and perceptions of the government's response.

3. The RRPS household definition is aligned with the one used by the KNBS. In the 2015/16 Kenya Integrated Household Budget Survey (KIHBS), conducted by the KNBS, households were defined as "a person or a group of people living in the same compound (fenced or unfenced); answerable to the same head and sharing a common source of food and/or income as a single unit in the sense that they have common housekeeping arrangements".²⁹ To ease the phone survey implementation, the KNBS's household definition was simplified. Such simplification was done based on the field testing carried out before the data collection. The RRPS household definition is "a person, or group of people, that eat from the same pot and spend four nights or more in an average week sleeping in the same home".

4. The estimates for refugee groups are compared with that of urban nationals for better comparability. Estimates for refugees are compared to only urban nationals rather than all or rural

²⁸ For access to the global questionnaire template, visit:

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/567571588697439581/questionnaire-template>

²⁹ Kenya National Bureau of Statistics 2018.

nationals. This is because even though refugees live in more remote areas, their living environments (the camps) are cities. Additionally, in terms of employment opportunities, occupations or access to agriculture, camp refugees resemble urban nationals much more closely. The dynamic driving employment outcomes would be very different between these two groups, making rural nationals an unfit comparison group.

2. Sampling and re-weighting

5. A nationally representative sample was randomly drawn from the 2015/16 KIHBS CAPI. The 2015/16 KIHBS is representative at the national level, stratified by county and place of residence (urban and rural areas). The KIHBS included a national sample of 21,773 households interviewed as part of a paper-based data collection and 12,851 households interviewed via CAPI (KIHBS CAPI). To select the sample, the Kenya COVID-19 RRPS firstly identified all households that were part of KIHBS CAPI and provided a phone number and used the resulting list of 9,009 households as a sampling frame. From this sample 3295 households were interviewed in the first wave, 3,664 were reached in the second wave, 3,982 in the third wave, 4,060 in the fourth wave, and 4,710 were reached in the fifth wave.

6. The second sample comprises households selected using the Random Digit Dialing method. 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 main 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. There were 763 completed interviews for this sample in the first wave of the RRPS, 840 in the second wave, 1,011 in the third wave, 846 in the fourth wave and 1,164 in the fifth wave. RDD gives us a representative sample of households that existed in 2015/16 but had changed their phone number as well as households that did not exist in 2015/16. Both groups of households that cannot be covered with the 2015/16 KIHBS CAPI sample alone.

7. 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. For refugees in Kakuma and Kalobeyei,³⁰ as well as for stateless people,³¹ recently conducted Socioeconomic Surveys (SES), were used as sampling frames. For the refugee population living in urban areas and the Dadaab camp, no such household survey data existed, and sampling frames were based on UNHCR's registration records (proGres), which include phone numbers.³² For Kakuma, Kalobeyei, Dadaab and urban refugees, a two-step sampling process was used. First, 1,000 individuals from each stratum were selected from the corresponding sampling frames. Each of these individuals received a text message to confirm that the registered phone was still active. In the second stage, implicitly stratifying by sex and age, the verified phone number lists were used to select the sample. For the stateless population, all the participants of

³⁰ UNHCR and World Bank, "Understanding the Socioeconomic Conditions of Refugees in Kenya. Volume A: Kalobeyei Settlement."

³¹ The Kakuma and Kalobeyei household surveys are representative of the refugee populations in each settlement, while the stateless survey is representative of the Shona community in Kenya.

³² The UNHCR in coordination with the Kenya Refugee Affairs Secretariat (RAS) registers persons of concern, including camp and non-camp refugees—most of whom reside in urban areas—as well as stateless persons.

the Shona socioeconomic survey³³ (n=400) were included in the RRPS, because of limited sample size.³⁴ The sampling frames for the refugee and Shona stateless communities are thus representative of households with active phone numbers registered with UNHCR. 1,326 households were interviewed in the first wave, 1,687 in the second wave, 1,469 in the third wave, 1,357 in the fourth wave and 1,536 in the fifth wave.

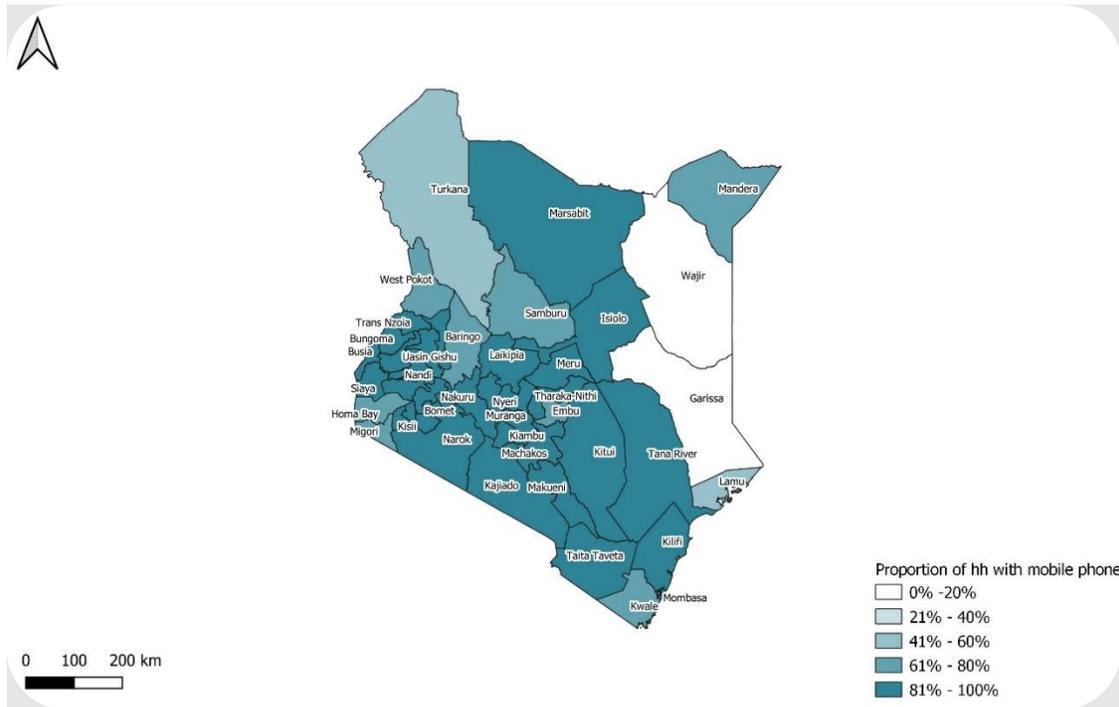
8. For each household, a target respondent is followed throughout all survey waves. All households in the sample were targeted in each wave independent of whether they were reached in a previous wave. The only exception being households that explicitly stated that they don't want to be called again in future waves. This means, some households were interviewed for the first time in wave 2 or 3. 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.

9. The COVID-19 RRPS household survey was not able to include households without active phone numbers. 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 (Figure 1). Although cellphone penetration and coverage are high, the sample excludes those households without a registered number, potentially excluding to some extent the poorest households who do not own phones or live in areas with no network coverage. The areas in the North-East of Kenya (shaded in white, Figure 1) have the lowest mobile phone penetration and are amongst the most vulnerable counties in Kenya. Conversely, most of the central and southern regions (shaded in darker blue) display a much higher mobile phone penetration. The Kenya COVID-19 Rapid Response Phone Survey uses re-weighting to enhance representativeness of the overall sample.

³³ To be released in September 2020.

³⁴ For the first round of the RRPS, 413 refugee households were interviewed in Kakuma camp, 264 in Kalobeyei settlement, 154 in Dadaab camp, 333 in urban areas, while 168 stateless population households were interviewed.

Figure D-1: Mobile coverage in Kenya



Source: 2019 Kenya Continuous Household Survey

10. The COVID-19 RRPS is built to be representative across the five waves with comparable characteristics. The survey is designed to have comparable socioeconomic characteristics for the households that are interviewed. Some of the summary statistics for the characteristics (household size, age and gender of the household head and the ownership of assets in the months preceding the pandemic) are presented in Table D-2.

Table D-2: Socioeconomic indicators by wave and by refugee status

Variable	Wave 1 (May-June 2020)			Wave 2 (July-September 2020)			Wave 3 (October-November 2020)			Wave 4 (January-March 2021)			Wave 5 (April- June 2021)		
	Urban Nationals (1)	Refugees (2)	t-test difference (2)-(1)	Urban Nationals	Refugees	t-test difference (2)-(1)	Urban Nationals	Refugees	t-test difference (2)-(1)	Urban Nationals	Refugees	t-test difference (2)-(1)	Urban Nationals	Refugees	t-test difference (2)-(1)
Household Size	3.75	5.48	1.722***	3.53	4.91	1.383***	2.88	4.25	1.374***	3	4.4	1.391***	2.64	3.61	1.810*
Age of household head	38	37	-0.441	37	38	0.388	34	36	1.988	34	38	3.403**	34	33	-0.34
Households headed by women	36.43%	29.81%	-0.066	37.97%	32.97%	-0.050	43.77%	39.1%	-0.047	43%	55.05%	0.121*	42.6%	59.3%	0.167
Household owns: Mattress	88.16%	75.55%	-0.127	88.11%	78.47%	-0.096**	91.31%	86.02%	-0.053	91.45%	81.04%	-0.104**	91.59%	88.74%	-0.02
Household owns: Radio	75.29%	27.87%	-0.474***	72.77%	42.21%	-0.306***	76.56%	45.48%	-0.311***	76.78%	39.97%	-0.368***	77.47%	43.7%	-0.338*
Household owns: Refrigerator	11.94%	0.41%	-0.115***	11.47%	0.67%	-0.108***	15.21%	0.67%	-0.145***	14.44%	1.44%	-0.130***	14.6%	0.94%	-0.137*
House physically connected to electricity grid	77.39%	18.47%	-0.589***	77.22%	37.89%	-0.393***	80.83%	35.15%	-0.457***	73.32%	19.28%	-0.540***	80.15%	56.16%	-0.240

Source: Kenya COVID-19 RRPS. Note: ***, **, and * indicate significance at the 1, 5, and 10 percent critical level

11. Sampling weights were constructed for each stratum to consider different probabilities of selection at baseline. To make the sample nationally representative, 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 number, 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.

12. Sampling weights for the national samples were adjusted to reflect geographic differences. For the second step we use post stratification to adjust for differential attrition and response rates across counties and rural/urban strata and with that ensure 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 KNBS³⁵.

13. Sampling weights for the refugee and stateless samples were tailored to the respective sampling strategies. Kakuma and Kalobeyi sub-samples have used the baseline weights from the respective SEA underlying the sampling frame to adjust for any differences in the sampling probabilities. Then, propensity score weighting based on the full population covered in the SES household survey, have been used to account for differences in the probability of owning a phone number.³⁶ The estimated propensity score reflects the household probability to have a phone number registered by UNHCR. To mitigate the effect of outlier estimates, the mean propensity score is computed for each decile. The baseline weights are then multiplied with the inverse of the propensity score deciles. For the refugees living in Dadaab camp and urban areas, a cell weighting approach have been used. Thereby, the sample is split into sub-groups (cells) based on the gender and age group of household head. The weights were then scaled such that they reflect the proportion of each cell in the UNHCR registration data of all refugees living in the respective location. In the group of stateless people registered with UNHCR, each household has the same weight assigned, as their full population is called in this survey. Lastly, to ensure sampling weights have the correct proportions across strata, they have been scaled to match population totals as provided by the up-to-date UNHCR registration data.

14. To address potential bias, some interviews were dropped from the labor analysis. 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. For each enumerator the mean proportion of households without any employment is calculated. Then, across all enumerators the 95 percent

³⁵ Kenya National Bureau of Statistics, "2019 Kenya Population and Housing Census, Volume II: Distribution of Population by Administrative Units."

³⁶ To construct the propensity score weights, a logit regression model is estimated for each stratum, where the dependent variable is an indicator for whether a household was in the COVID-19 RRPS sample. The set of explanatory variables included dummies for the country of origin, number of children, dependency ratio as well as the gender, literacy and employment status of the household head.

confidence interval of this mean proportion is established. Enumerators who display a proportion of households with no employment above the upper bound of the confidence interval are dropped. 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.

15. 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 waves 1 and 2, using the information provided for all household members in waves 3,4, and 5. This resulted in additional information on the education status for household members in round 1 and 2, which was not yet available for earlier analysis of the Kenya COVID-19 RRPS.