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Monitoring COVID-19 Impacts on Households in Zambia

WORLD BANK GROUP

Results from a High-Frequency Phone Survey of Households

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INTRODUCTION

The COVID-19 pandemic and its economic and social effects on households have created an urgent need for timely data to help monitor and mitigate the social and economic impacts of the crisis and protect the welfare of the least well-off in Zambian society. To monitor how the COVID-19 pandemic is affecting Zambia's economy and people and to inform interventions and policy responses, the World Bank designed and conducted a rapid phone-based Household Monitoring Survey (HMS).

This brief summarizes the results of the first round of the HMS, implemented between June 5 and June 26, 2020. The brief is based on a sample of 1,602 households in both urban and rural areas in all ten provinces of Zambia.[1] The survey is representative at three levels: Lusaka, urban excluding Lusaka, and rural. The 25-minute questionnaire covers such topics as knowledge of COVID and mitigation measures, access to educational activities during school closures, employment dynamics, household income and livelihood, income loss and coping strategies, and assistance received.

HIGHLIGHTS – ROUND 1

- Households in Zambia are well aware of COVID-19, and the vast majority have knowledge of and practice behaviors that are necessary to lower the risks of contracting and spreading the virus.
- Less than half of children who were in school before the pandemic are engaging in any distance learning. Of those who are, the most common means is through educational TV shows.
- There has been a considerable fall in household income since the start of the pandemic – 4 in 5 households reported a drop-in income from nonfarm business, and 1 in 3 reported a reduction or disappearance of wages.
- There has been a considerable reduction in employment in both urban and rural areas. Job losses have been particularly severe in the tourism, manufacturing and services sectors.
- There has been a concerning impact on household food security, with a high proportion of respondents reporting skipping meals or running out of food. These results are consistent across urban and rural parts of Zambia.

[1] Interviews were conducted telephonically by IPSOS Zambia.

KNOWLEDGE AND BEHAVIOR IN RESPONSE TO COVID-19

To prevent the spread of COVID-19 and to ensure that measures to slow it, such as mobility restrictions and market closures, are effective, it is essential that people be aware of the need to change their behaviors. Virtually every household (99.8 percent) had heard about the coronavirus or COVID-19. The respondents reported being well-informed about actions to reduce the spread. Almost everyone knew about handwashing, and more than 95 percent knew that it is important to stay home and avoid gatherings. Differences between Lusaka, other urban and rural areas were relatively small. About 94 percent of respondents report having received information on how to adopt containment behaviors, and almost all indicated they had changed their behavior to reduce the risk of contracting COVID-19. About 96 percent of respondents wash their hands more often than before COVID-19, a similar proportion avoids handshakes or physical greetings, and 92 percent avoid gatherings (Table 1). Once again, differences in behavior between Lusaka, other urban areas and rural parts of the country are not pronounced. It is important to bear in mind that some caution should be applied in interpreting these results as there is generally a tendency to overreport positive behavior changes in surveys such as the HMS.

Table 1: Knowledge of actions to reduce exposure

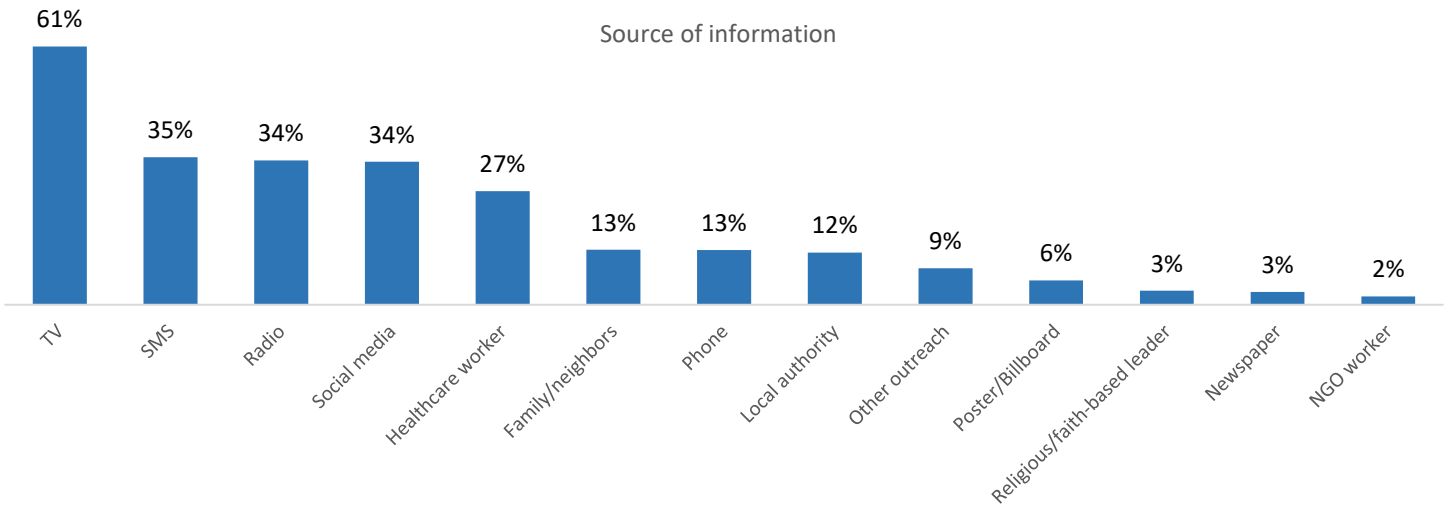
Since the pandemic did you…	Lusaka	Urban excl. Lusaka	Rural	National
...wash hands more?	96%	97%	96%	96%
…avoid handshakes?	94%	96%	95%	95%
…avoid gatherings?	89%	92%	94%	92%
...cancel travel?	76%	80%	79%	79%
…stock up on food?	50%	51%	50%	50%
…reduce trips to market/stores?	81%	83%	84%	83%

SATISFACTION WITH GOVERNMENT'S RESPONSE

Overall about 3 in 4 Zambians report that they are satisfied with government's response to the pandemic so far. In Lusaka the figure is lower (70 percent) than in rural areas (78 percent). Of those who are not satisfied, the main criticisms are that there is a shortage of materials (medical materials and masks), and that the restrictions have made it too difficult to make a living.

Most respondents report that they receive information about social distancing and preventative measures from TV (61 percent). However, TV as a source of information is much more important in Lusaka (71 percent) than in other parts of the country, particularly rural areas (53%). Unsurprisingly messaging on social media plays more of a role in spreading information in urban areas than in rural parts of the country. Obtaining information through SMSes or radio stations are other important sources, and do not differ markedly across different parts of the country (Figure 1). Rural households were twice as likely to receive information from a local authority than urban households (16 percent vs 8 percent).

Figure 1: Where are Zambians getting information about social distancing and preventative measures?



ACCESS TO NECESSITIES

There is still quite a lot of uncertainty around how COVID-19 and associated containment measures will impact the availability and prices of medicine and food staples. If individuals seek to stockpile in periods of scarcity, there may be scarcity and rises in the prices of commodities in demand. Escalating food prices combined with negative income shocks will lead to household welfare being eroded. HMS respondents were asked whether their household was able to buy enough medicine and enough of the most important food items during in the period since containment measures were put in place. In cases where households were not able to access enough medicine and food staples, they were asked for the main reasons why.

A quarter of HMS households reported being unable to access any market in the period since containment measures were put in place, while 16 percent had tried to buy medicine but were unable to. Nearly one fifth of households reported that they had not been able to buy the main staple food (generally nshima) since containment measures were put in place. The effect is slightly more prevalent in Lusaka than in the rest of the country. As shown in Table 2, for these households, the most common reason cited for their inability to buy their main staple food was because of an increase in price (40 percent). This effect was slightly higher in rural areas than in the rest of the country. The second most prevalent reason for not being able to purchase staple food is a lack of access to cash, associated with a decrease in regular income. This effect was strongest in Lusaka (32 percent), but was also a problem in other urban areas (28 percent) and rural areas (24%).

Table 2: Reasons why households were unable to buy main staple food

Could not buy main staple food because…	Lusaka	Urban excl. Lusaka	Rural	National
…shops out of stock	10%	13%	9%	11%
…local markets closed	5%	5%	8%	6%
…no transport	0%	6%	6%	5%
…restrictions to going outside	5%	6%	14%	9%
…increase in price	38%	37%	43%	40%
…lack of access to cash	32%	28%	24%	27%

About one fifth of households with a member who sought medical care since the containment measures were unable to be treated. The main reasons provided were because of a lack of supplies and personnel at the clinic/hospital, and because respondents were afraid of going to the clinic because of fears of contracting the virus.

SCHOOLS

On March 20, 2020, Zambia closed all school country wide, affecting about 4 million learners. In addition to students losing valuable months of schooling, school closures may deprive the children of poor families of food, because they often rely on school feeding programs – nearly 1.2 million children will miss out on school meals because of the containment measures. Temporary school closures may also lead to permanent drop-out of children from vulnerable households, especially in rural areas where even in ordinary circumstances early drop-out is more common. The long-term impacts of lost months of schooling and nutrition will be particularly severe for children in poor families, because it will jeopardize their development of human capital and their earning potential.

The HMS asked households how many children (boys and girls separately) were in school before the outbreak began and whether they are now engaged in any learning activities. Once schools reopen, future rounds will follow up to see how many children returned to school. About 76 percent of households (with the proportion slightly higher in rural areas) have school-aged children. Of those, 89 percent have children who had attended school before outbreak; there was no difference between households in Lusaka, other urban areas and rural parts of the country. Less than half of children who attended schools before they were closed are engaged in distance learning activities. In rural areas, 44 percent of households have children engaged in any form of learning activity, compared to 52 percent of households in Lusaka (Figure 2).

For all school-age children in Zambia the most common learning activity taking place during school shutdowns is watching classes on TV (Figure 2). There were not large differences over the three strata of the survey for this variable. Children in Lusaka are more likely to have met with a teacher to go over schoolwork than children in the rest of the country. The proportion of children listening to classes on the radio is small everywhere, though a higher share of rural children are accessing learning through this medium. Around 16 percent of all children who are not in school in Lusaka are using mobile learning apps to keep up with schoolwork, compared to 14 percent in other urban areas, and only 6 percent of children in rural parts of the country.

Figure 2: Households with learners who previously attended school and are now engaged in learning activities

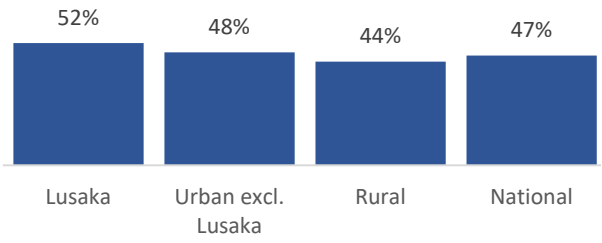
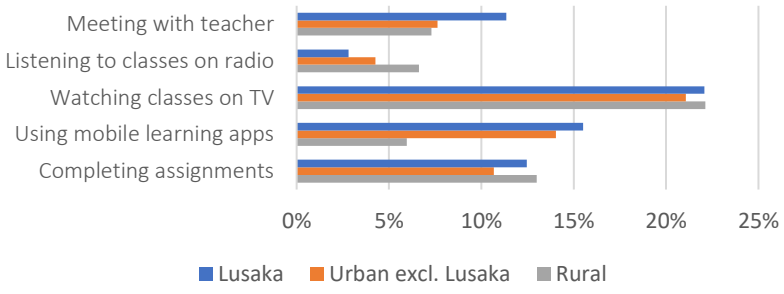


Figure 3: Educational activities students engage in during school closures (all age-eligible children)



HOUSEHOLD INCOME SOURCES

One of the channels through which households are negatively affected by the pandemic and its associated restrictions of movement and assembly is through reduced income. The HMS asked respondents about their income sources over the last 12 months and followed up by asking whether the income from a particular source has increased, remained the same, decreased or disappeared since the outbreak of the pandemic (Table 3).

A surprisingly low 40 percent of rural households report income from farming as a means of livelihood over the previous 12 months. Part of the explanation for this may be because rural household producing for subsistence purposes would sell any surplus, and would therefore not record a direct income from this activity. Also, the fact that the HMS is a phone-based survey means that it is likely that the poorest rural households are not being reached because of poor connectivity, or because they do not own a cellphone. Just under one in five households in Lusaka reports receiving income from farming activities, compared to just over one quarter in other urban areas. Wage employment is the most commonly reported source of household income across the sample (anyone in the household has received a wage over the last 12 months), with relatively small differences across the country. Households in Lusaka are about twice as likely to report any income from savings or renting out property than households in rural parts of the country.

Table 3: Sources of household income over the last 12 months

Household receives any income from…	Lusaka	Urban excl. Lusaka	Rural	National
…farming, livestock or fishing	18%	27%	40%	32%
…nonfarm business	37%	31%	34%	34%
…wage employment	51%	51%	46%	49%
…unemployment benefits	2%	2%	0%	1%
…remittance from abroad	2%	1%	0%	1%
…remittance from family in Zambia	11%	9%	10%	10%
…assistance from non-family	5%	2%	4%	3%
…savings/investments/rentals	12%	9%	6%	8%
…pension	2%	1%	1%	1%
…assistance from government	1%	1%	1%	1%
…assistance from NGO or charity	1%	0%	0%	0%

There was a steep reduction in self-reported labor income since the outbreak of COVID-19 (Table 4). About 82 percent of households that cited nonfarm business as a means of livelihood in the past 12 months reported less income from that source (71 percent) or a total loss of that income (11 percent). Income from farming was reduced for over half of households and had stopped entirely for 8 percent of households. About two thirds of households reporting wage employment as an income source saw no change to wages since the outbreak of the pandemic – highlighting the stark contrast between workers in the formal and informal/self-employed sectors. Domestic remittances have also fallen since the outbreak of the pandemic, with 58 percent of remittance-receiving households reporting a reduction in remittance income, and 14 percent reporting a cessation of this income source.

Table 4: Change in income from four main household income sources since outbreak

Household income source	Increased	Stayed the same	Reduced	Stopped
Farming, livestock or fishing	18%	23%	51%	8%
Nonfarm business	7%	10%	71%	11%
Wage employment	2%	65%	26%	7%
Remittance from family in Zambia	8%	20%	58%	14%

COPING MECHANISMS

As outlined above, the majority of households experienced a reduction in revenue from their primary income sources. Households were also asked to report on a number of economic shocks that could negatively impact their livelihood. The most commonly reported shocks were the closure of a non-farm business (21 percent), general job loss (17 percent), and loss of a salaried job (16 percent). Households suffering from any such shock were then asked what, if any, coping strategies they had used to help mitigate the negative impact (Table 5). In response to any one shock, the most commonly employed coping strategy was to engage in additional income generating activities (31 percent). Other commonly employed strategies were to rely on savings (16 percent), reduce food consumption (12 percent), and to rely on assistance from family and friends (12 percent). In many cases, the household was not able to enact any strategy to deal with a given shock (44 percent). There were no major differences between regions, although rural Zambians were less able to engage in additional income generating activities as a coping mechanism, as compared to those in urban areas outside Lusaka (27 percent versus 37 percent).

Table 5: Coping mechanisms employed to mitigate the impact of economic shocks

In response to a shock the household…	Lusaka	Urban excl. Lusaka	Rural	National
…sold assets	3%	1%	0%	1%
…engaged in additional income gen. activities	30%	37%	27%	31%
…received assistance from friends and family	13%	12%	12%	12%
…borrowed from friends and family	8%	7%	3%	5%
…reduced food consumption	11%	11%	12%	12%
…reduced non-food consumption	5%	7%	7%	6%
…relied on savings	16%	14%	17%	16%
…did nothing	40%	38%	49%	44%
…employed some other coping mechanism	16%	10%	16%	14%

EMPLOYMENT STATUS AND SECTOR

The pandemic has had a considerable impact on employment in Zambia, with the imposition of public health measures including the closure of most businesses and the suspension of cross border passenger services. Although the government ordered the easing of these measures from May 8th, their repercussions continue to be felt throughout the economy. Roughly 72 percent of respondents reported having a job before the imposition of social and economic restrictions (Table 6). The share of people employed was somewhat higher in Lusaka (77 percent) compared to other urban areas (69 percent). Employment fell significantly since the onset of the pandemic, with only 54 percent of respondents reporting having done any paid work in the week prior to the survey in June. The fall in employment was similar across all three strata. Of respondents not working at the time of the interview, about 41 percent had been working before the outbreak, rising to 46 percent when considering only those in Lusaka. When asked about the reasons for losing their jobs (Table 7),

respondents overwhelmingly answered that the businesses or agencies where they worked were closed due to the imposed restrictions (63 percent).

Table 6: Employment status

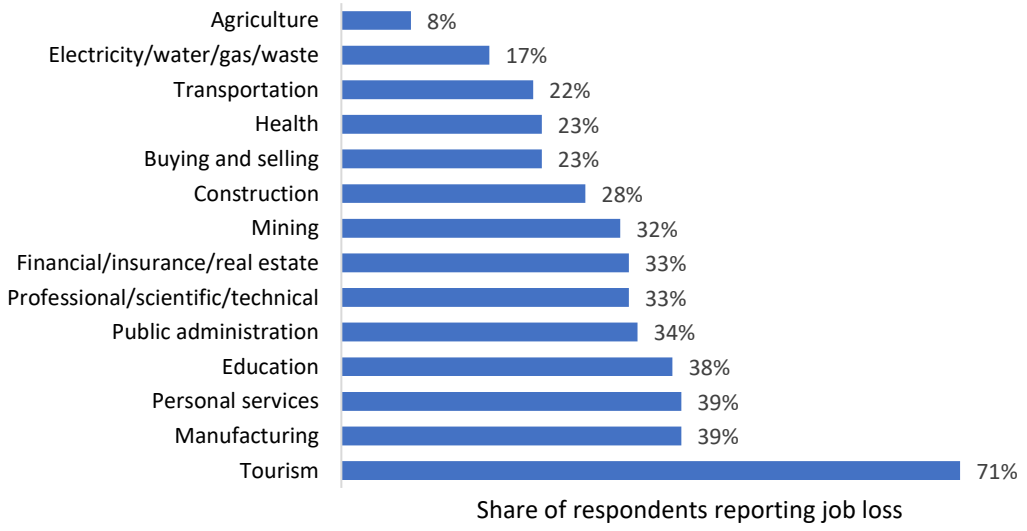
Percentage of respondents who…	Lusaka	Urban excl. Lusaka	Rural	National
…were employed prior to March 20th	77%	69%	72%	72%
…reported working in week before interview	57%	52%	54%	54%

Table 7: Reasons for job ending since the outbreak began

Respondent lost job because…	Lusaka	Urban excl. Lusaka	Rural	National
…business closed due to COVID restrictions	72%	66%	58%	63%
…business closed for another reason	4%	6%	7%	6%
…they were laid off while business continues	5%	4%	7%	6%
…they were furloughed	5%	8%	3%	5%
…for other reasons	13%	16%	25%	20%

Respondents were asked to report the sectors in which they had been working prior to the onset of the COVID-19 pandemic. The most common sectors of employment were "buying and selling" (i.e. market and retail jobs, 29 percent), followed by education (15 percent), and agriculture (14 percent). By a large margin, the respondents most likely to have lost their jobs worked in the tourism industry, with 71 percent of those workers finding themselves unemployed at the time of the survey. This is unsurprising given the restrictions imposed on international and domestic travel. The other sectors most heavily affected by job loss included manufacturing (39 percent), personal services (39 percent), and education (38 percent). As would be expected, agricultural workers fared best when it came to retaining their jobs during the pandemic, with only 8 percent experiencing job loss. Due to the heavy preponderance of persons working in the domains of buying and selling and education, the highest absolute numbers of jobs lost were in these sectors.

Figure 4: Respondent job losses by sector since outbreak began



FAMILY BUSINESS

Revenue from family businesses has been greatly impacted by the COVID-19 pandemic. More than half of HMS respondents reported that a household member operated a family business (53 percent). Of those, 78 percent indicated that their income from the family business was less than usual or that there was no income at all (Table 8). This revenue loss was attributed to several different factors, but the most significant were a lack of customers (58 percent) and the usual place of business being closed due to public health restrictions imposed by the authorities (33 percent). Restrictions on travel were cited more by respondents in rural areas (18 percent) than those in Lusaka and other urban areas (13 percent).

Table 8: Changes in non-farm family business revenue

Reported business revenue was…	Lusaka	Urban excl. Lusaka	Rural	National
…higher	6%	8%	12%	10%
…the same	13%	15%	12%	13%
…less	63%	60%	58%	60%
…no revenue	19%	17%	18%	18%

Table 9: Reasons for non-farm business revenue loss

Revenue was lost because…	Lusaka	Urban excl. Lusaka	Rural	National
…place of business closed due to COVID restrictions	33%	33%	34%	33%
…place of business closed for other reasons	4%	4%	4%	4%
…no costumers or fewer customers	63%	65%	53%	58%
…unable to get inputs	4%	10%	8%	8%
…cannot travel or transport goods for trade	13%	13%	18%	15%

JOB LOSS OF OTHER HOUSEHOLD MEMBERS

Detailed information could not be collected about all household members, given that phone surveys are inherently limited in their length and complexity. The survey was nonetheless able to ask whether in the preceding week, a member of the household (apart from the respondent) was unable to perform his or her usual wage job. At the national level, 18 percent of respondents answered yes to this question, with only small differences between urban and rural areas. Given the limitations of the survey, it is impossible to know how many workers are affected in this way and how many family members had jobs prior to COVID. Nonetheless, this provides some indication of disruption to a household's income generating activities beyond the primary breadwinner.

FOOD SECURITY

The food security situation in Zambia was worsening even before the onset of the pandemic. The UN Food and Agriculture Organization (FAO) noted that number of food insecure people in the country more than doubled in 2019/20 compared to previous year and that maize prices were at record highs.[2] Although the HMS format did not allow for a complete food consumption module, several questions

[2] http://www.fao.org/giews/countrybrief/country.jsp?code=ZMB

were asked to give a general indication of food security at the household level. The results are concerning. Two thirds of survey respondents reported that in the last 30 days they themselves or some other adult in the household was worried about not having enough food to eat because of lack of money or other resources (Table 10). The proportion of households in which at least one person was forced to skip a meal during that period due to lack of money or resources was 39 percent. Finally, 16 percent of households reported someone going without food for an entire day. These numbers were not noticeably different in urban and rural areas. Given that the HMS was forced to exclude respondents without access to a telephone, it is reasonable to assume that such food insecurity indicators would be even more severe in a more broadly representative national sample. It is furthermore important to note that the annual harvest in Zambia runs from April to July, meaning that these concerning results are being reported during a time when food stocks are high and after the seasonal hunger gap has passed.

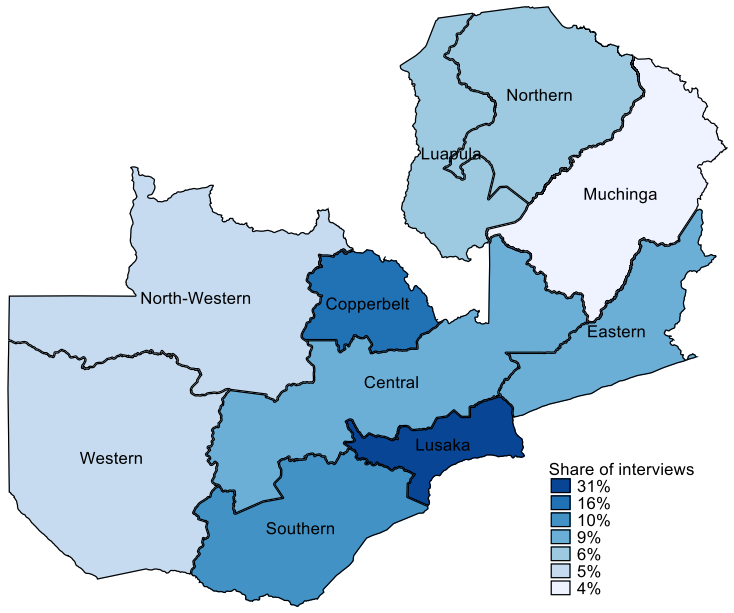
Table 10: Household food insecurity experience

During the past 30 days was there a time…	Lusaka	Urban excl. Lusaka	Rural	National
…when you worried about having enough food	66%	68%	67%	67%
…someone in your household skipped a meal	39%	39%	39%	39%
…your household ran out of food	43%	42%	40%	41%
…a household member did not eat for a whole day	17%	17%	16%	16%

BOX: SURVEY METHODOLOGY

The HMS survey of households monitors the economic and social impacts of and responses to the COVID-19 pandemic on households in terms of such topics as access to food staples, access to educational activities during school closures, employment dynamics, household incomes and livelihoods, income losses and coping strategies, and external assistance. The final dataset will cover a panel of about 1,600 households that is representative of households with access to a mobile phone nationally and of Lusaka, urban excluding Lusaka, and rural areas.

Share of HMS Round 1 households by province



To the extent possible, the same households and respondents will be tracked for twelve months, with selected respondents completing phone-based interviews every six to eight weeks. This high-frequency follow-up allows for a better understanding of the effects of and responses to the COVID-19 pandemic on households in order to inform interventions and policy responses and monitor their effects. The respondent is typically the household head. In case that person cannot be reached despite numerous call-backs, another knowledgeable household member will be selected as the respondent.

The HMS sample consists is drawn from a masterlist of phone numbers that have been collected during previous nationally-representative surveys in Zambia. The subsample of interviewed households is representative of those households with access to a phone, covering Lusaka, other urban and rural areas in all provinces of Zambia. The HMS achieved a sample size of 1,602 households, covering all provinces (as in the figure above) with 31 percent in Lusaka, 16 percent in Copperbelt and 10 percent of fewer in the other eight provinces. Sample weights were constructed by first adjusting for the probability of being selected from the masterlist. These weights were then poststratified by urban/rural location, sex and province. Phone penetration rates in Zambia are around 70 percent, though this number is lower in rural areas. This also means that we gather data from households that are systematically different from those that do not own a mobile phone. Phone owning households are better off in terms of total consumption, educational attainment, access to improved water and sanitation, access to assets, and access to electricity. The sample of the HMS is therefore only representative of households who have access to phones in Lusaka, other urban and rural Zambia.

Data collection parameters, Round 1:

- Data collection period: June 5 to June 26 2020
- Completed interviews: 1,602 households (500 in Lusaka, 627 in urban areas excluding Lusaka, 475 in rural areas)
- Average duration of interview: 28 minutes